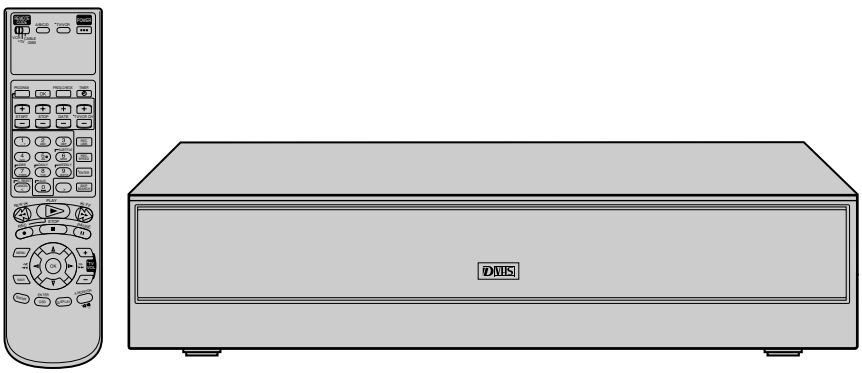
JVC

D-VHS DIGITAL RECORDER

SR-VD400E



PRO HD
D-VHS MTP NTSC
S-VHS
Hi-Fi
Super VHS ET
DOLBY DIGITAL
PCM

INSTRUCTIONS

LPT0891-001B

EN

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
Use only discs marked with the following.

CAUTION:

- When you are not using the unit for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

IMPORTANT

- Please read the various precautions on pages 2 and 3 before installing or operating the unit.
- It should be noted that it may be unlawful to re-record prerecorded tapes, DVDs, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

D-VHS MTP NTSC S-VHS DOLBY DIGITAL

- Cassettes marked D-VHS, S-VHS and VHS can be used with this video cassette recorder. However, D-VHS recordings are possible only with cassettes marked D-VHS.
  By using S-VHS ET it is possible to record and play back with S-VHS picture quality on VHS cassettes with this VCR.
- D-VHS is a new digital memory system that uses D-VHS tapes. D-VHS was developed as a memory system for multimedia applications that require storage for large volumes of information, such as for digital video.
- Manufactured under license from Dolby Laboratories. Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. Copyright 1992-1997 Dolby Laboratories. All rights reserved.

i.LINK cable:

- Use the commercially available i.LINK cable (4-pin, S400, below 3 m).
  If the cable used is above 3 m, the operation of this VCR is not guaranteed.

The [STANDBY/ON ⏻/I] button does not completely shut off mains power from the unit, but switches operating current on and off. [⏻] shows electrical power standby and [I] shows ON.

Video tapes recorded with this unit in the LP/EP (Long Play/Extended Play) mode cannot be played back on a single-speed video recorder.

When the equipment is installed in a cabinet or a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm or more on both sides, on top and at the rear).

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

Failure to heed the following precautions may result in damage to the unit, remote control or video cassette.

1. **DO NOT place the unit…**
   … in an environment prone to extreme temperatures or humidity.
   … in direct sunlight.
   … in a dusty environment.
   … in an environment where strong magnetic fields are generated.
   … on a surface that is unstable or subject to vibration.
2. **DO NOT block the unit's ventilation openings or holes.**
   (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
3. **DO NOT place heavy objects on the unit or remote control.**
4. **DO NOT place anything which might spill on top of the unit or remote control.**
   (If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)
5. **DO NOT expose the apparatus to dripping or splashing.**
6. **DO NOT use this equipment in a bathroom or places with water. Also DO NOT** place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups, etc.) on top of this unit.
7. **DO NOT place any naked flame sources, such as lighted candles, on the apparatus.**
8. **AVOID violent shocks to the unit during transport.**

MOISTURE CONDENSATION

Moisture in the air will condense on the unit when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the unit turned on for a few hours to let the moisture dry.

ATTENTION

To mobile phone users:

Using a mobile phone in the vicinity of the unit may cause picture vibration on the TV screen or change the screen to a gray back display.

On placing the unit:

Some TVs or other appliances generate strong magnetic fields.
Do not place such appliances on top of the unit as it may cause picture disturbance.

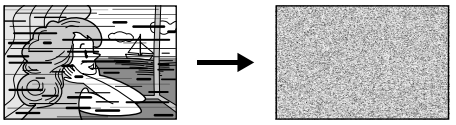
ABOUT HEAD CLEANING

After an extended period of use, the video heads can become dirty, resulting in a loss of picture or sound during playback. If this happens, clean the video heads by using the optional cleaning tapes.

Symptoms of dirty video heads:

- The picture is not clear, or does not appear. There is no sound.
- Mosaic (block) noise appears in the picture.
- Black or mosaic horizontal stripes appear in the picture.
- The picture stops (as if the tape is paused).
- A blank black or blue screen appears.
- The picture is fuzzy. (VHS playback)

VHS playback



Early symptom — Late symptom

D-VHS playback

Block noise — Still image — Black screen

Use a cleaning tape designed specifically for D-VHS video heads (JVC D-VHS video head cleaner DFC-2) to clean the video heads.

- In order to avoid misoperation, set "NAVIGATION" to "OFF" (☞ page 25).
- Follow the instructions that are provided with the cleaning tape.

If you still do not get a clear picture after using a cleaning tape:

- The heads may be worn. Contact your nearest JVC dealer.
- During VHS playback, if there is a tracking problem, the picture may appear fuzzy. Adjust the tracking manually (☞ page 10).

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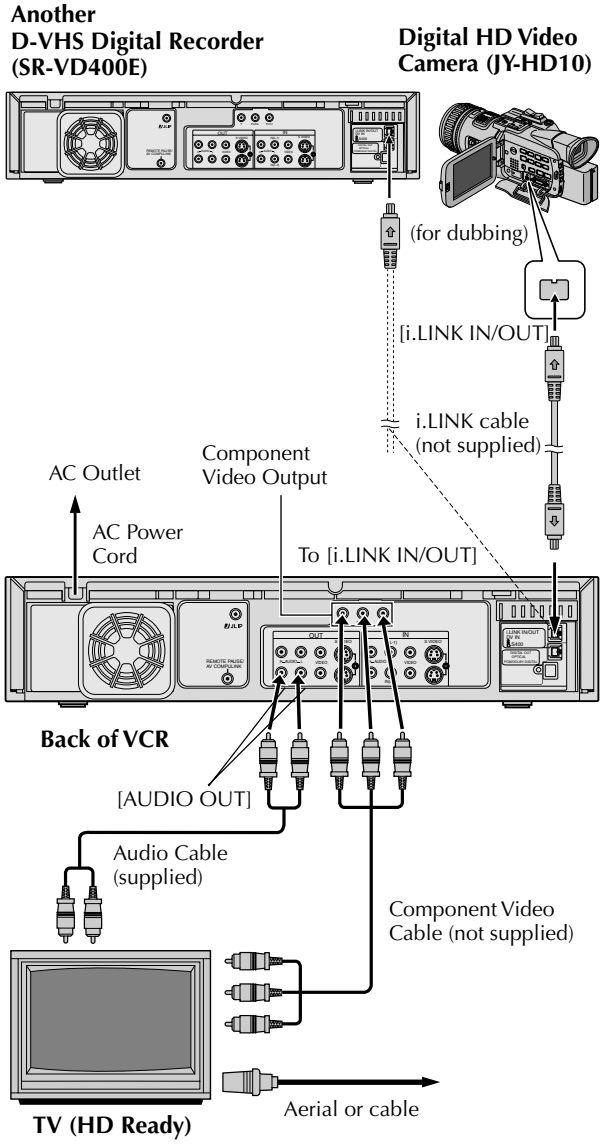
Connections



Preparations

— Check contents

Make sure the package contains all of the accessories listed in 'SPECIFICATIONS' (☞ page 59).

— Situate VCR

Place the VCR on a stable, horizontal surface.

i.LINK Connections

1 Make connections

— Connect VCR to TV

❶ Connect an audio cable between the VCR's [AUDIO OUT] connectors and the TV's audio input connectors.

❷ Connect a component video cable between the VCR's Component video output terminals and the TV's Component video input terminals.

NOTE:

If your TV do not have Component video input terminals, connect the S-VIDEO cable between the VCR's [S VIDEO OUT] terminal and the TV's S-video input connector.

— Connect VCR to the Digital HD Video Camera (JY-HD10)

Connect an i.LINK cable between the VCR's [i.LINK IN/OUT] connector and JY-HD10's [i.LINK IN/OUT] connector.

— Connect VCR to another VCR (SR-VD400E)

Connect an i.LINK cable between the playback VCR's [i.LINK IN/OUT] connector and the recording VCR's [i.LINK IN/OUT] connector.

NOTE:

Depending on the devices equipped with the i.LINK connector which is connected to the VCR, picture noise on this VCR may differ from the noise on the connected devices. It is caused by the difference of the data processing method.

2 Connect VCR to power source

Connect the AC power plug to the AC outlet.

3 Final preparation for use

Turn on the VCR.

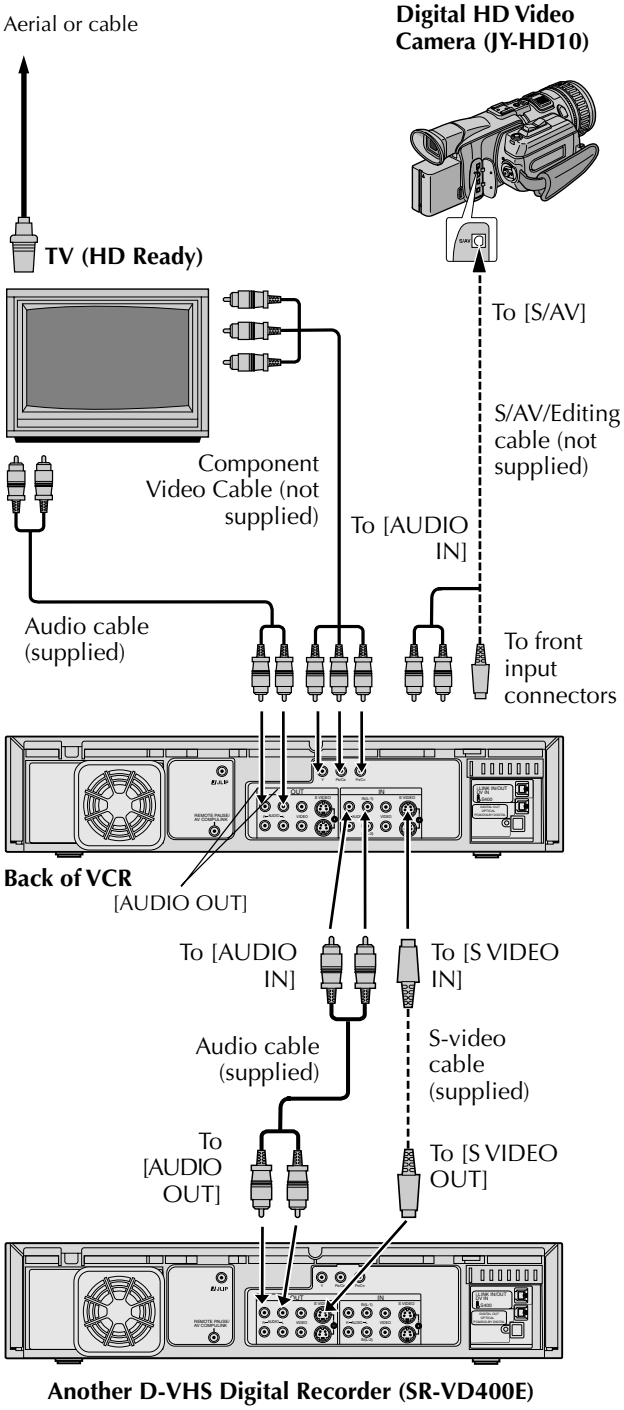
- You can now perform 'basic playback' (☞ page 8) or 'editing' (☞ page 18).

NOTES:

- *When connecting VCR to TV with a component video cable, a menu screen will appear on the TV.*
- *Use the commercially available i.LINK cable (4-pin, S400, below 3 m). If the cable used is above 3 m, the operation of this VCR is not guaranteed.*
- *To view the picture of 480i image format on the TV, connect the component video cable to the TV's Y/CB/CR connectors. If your TV uses both the Y/PB/PR and S-video connectors, connect also the S-video or video connectors between the VCR and TV.*
- *For full identification of the VCR's rear panel, refer to the Index (☞ page 56).*
- *If you cannot see the pictures on the TV screen when you play back a tape, set "TV OUTPUT 1" to the appropriate mode (☞ page 38).*

S-VIDEO/VIDEO Connections

First follow Preparations on page 5, then go to the following steps.



1 Make connections

— Connect VCR to TV

Refer to **1** 'Connect VCR to TV' on page 5.

— Connect VCR to the Digital HD Video Camera (JY-HD10)

Connect an audio/S-video cable between the VCR's [AUDIO/S VIDEO IN] connectors and JY-HD10's [S/AV] connectors.

— Connect VCR to another VCR (SR-VD400E)

Connect an audio/S-video cable between the playback VCR's [AUDIO/S VIDEO OUT] connectors and the recording VCR's [AUDIO/S VIDEO IN] connectors.

2 Connect VCR to power source

Connect the AC power plug to the AC outlet.

3 Final preparation for use

Turn on the VCR.

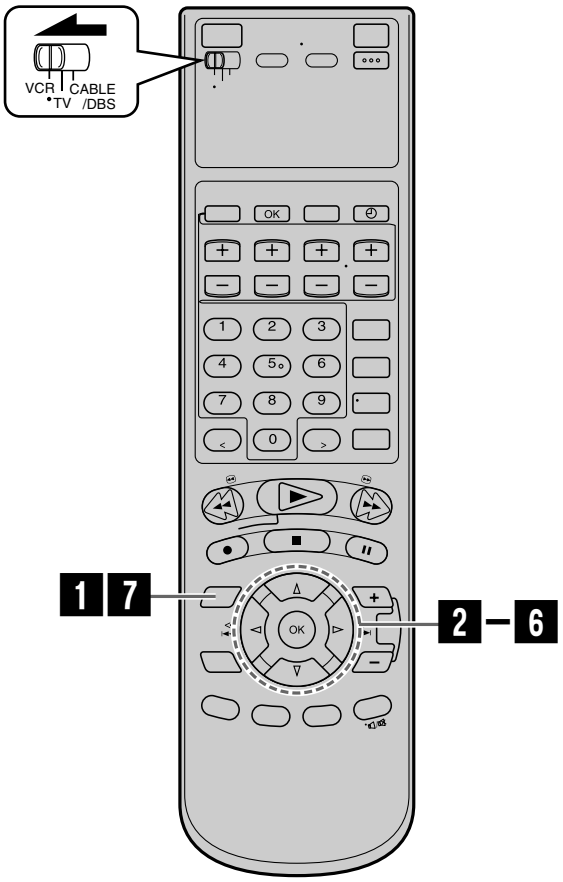
- You can now perform 'basic playback' (☞ page 8) or 'editing' (☞ page 18).

NOTES:

- *To operate the VCR with your TV using the component or S-video connection, set your TV to the AV mode using the TV's Remote.*
  You can also use the [TV/VCR] button on the VCR's Remote to set your TV to the AV mode (☞ page 45).
- *If you cannot see the pictures on the TV screen when you play back a tape, set "TV OUTPUT 1" to the appropriate mode (☞ page 38).*

Clock Setting

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



Setting clock manually
— Manual Clock Set

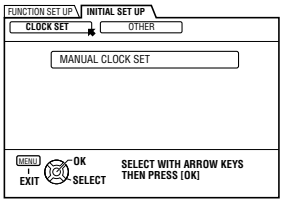
Access the Clock Set screen to perform the Manual Clock Set.

1 **Access Main Menu screen**

Press [MENU].

2 **Access Clock Set screen**

1 Press [◁ ▷] to move the arrow to "INITIAL SET UP", then press [▽] or [OK].
2 Press [◁ ▷] to move the arrow to "CLOCK SET", then press [▽] or [OK].



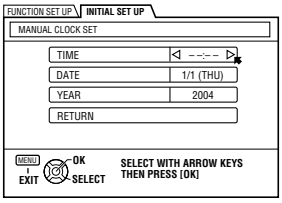
3 **Access Manual Clock Set screen**

Press [▽] or [OK] to access "MANUAL CLOCK SET".

4 **Set time**

Press [◁ ▷] until the desired time appears, then press [▽].

- Holding [◁ ▷] changes the time in 30-minute intervals.



5 **Set date**

Press [◁ ▷] until the desired date appears, then press [▽].

- Holding [◁ ▷] changes the date in 15-day intervals.

6 **Set year**

Press [◁ ▷] until the desired year appears.

7 **Start clock**

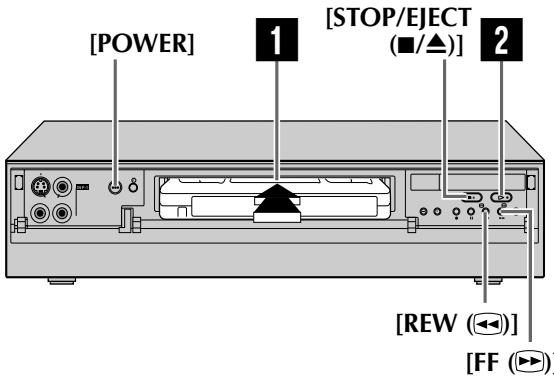
Press [MENU] and normal screen appears.

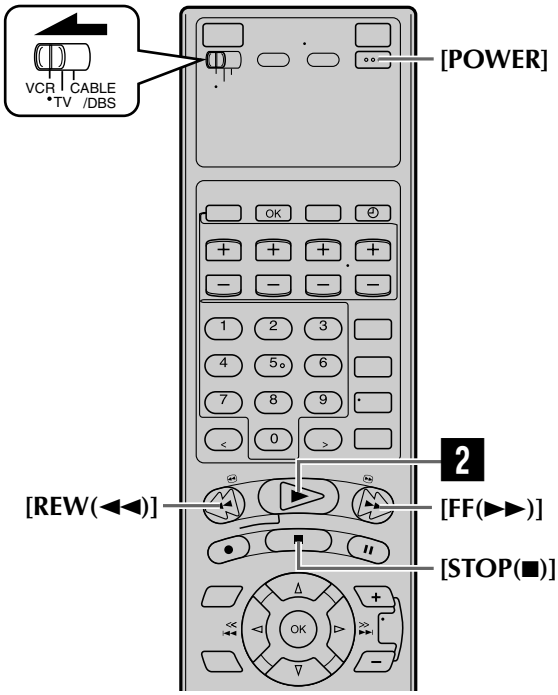
To make corrections any time during the process

Press [△▽] to select the item you want to change, then press [◁ ▷].

Basic Playback

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].





NOTES:

- *When you use the Video Navigation function, operate the VCR only after the tape number is detected; otherwise, you cannot use the Video Navigation function.*
- *It takes a moment until the image appears on the TV screen when you play back a program recorded in LS5 mode. The picture may pause or the block noise may appear.*
- *It will take a moment until the image appears when you play back cut segments (segments for which recording was continued after stopping or pausing) or segments for which recording was switched from VHS mode (SP or EP) to D-VHS mode.*

This VCR can check the tape condition during playback (and recording), and realizes the best possible pictures.

- This VCR can play back tapes that have been recorded in D-VHS (MTP), S-VHS, S-VHS ET and VHS formats.
- When playing back a tape, this VCR automatically identifies the recording format (D-VHS, S-VHS, S-VHS ET or VHS).
- When you play back a tape recorded on this VCR, you can use the Video Navigation function (☞ page 24).

1 Load a cassette

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR.
Do not apply too much pressure when inserting.

- The VCR turns on automatically.
- The tape will run for a few seconds while the VCR searches for the tape number. If the tape number is found, it will be shown on the TV screen if "SUPERIMPOSE" is set to "ON" (☞ page 39).
- The counter is reset automatically, however, it is not completely reset to "0:00:00".
- If the cassette's record safety tab has been removed, playback begins automatically.
- When you playback a D-VHS tape, the [D-VHS] indicator lights up.

2 Start playback

Press [PLAY (►)].

- Recording speed is automatically detected.
- If "V. CALIBRATION" is set to "ON" (default setting) and "PICTURE CONTROL" is set to "AUTO": (☞ page 36), "VIDEO CALIBRATION" appears on the screen, and this VCR checks the tape condition during automatic tracking (only cassettes recorded in the S-VHS, S-VHS ET or VHS mode).

To stop playback

Press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

To rewind the tape (when it is not running)

Press [REW (◄◄)].

To fast-forward (when it is not running)

Press [FF (►►)].

To eject the tape

Press [STOP/EJECT (■/⏏)] on the front panel when the tape is not running.

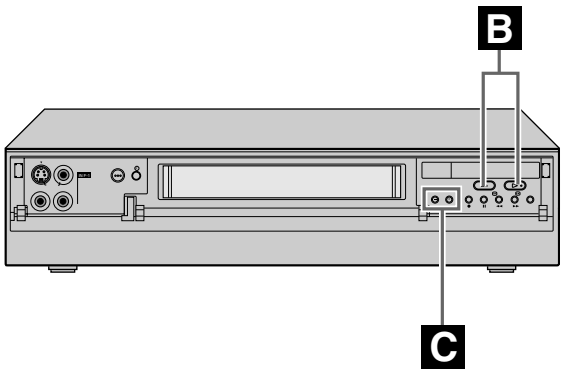
- You can also eject the cassette when the VCR is turned off.

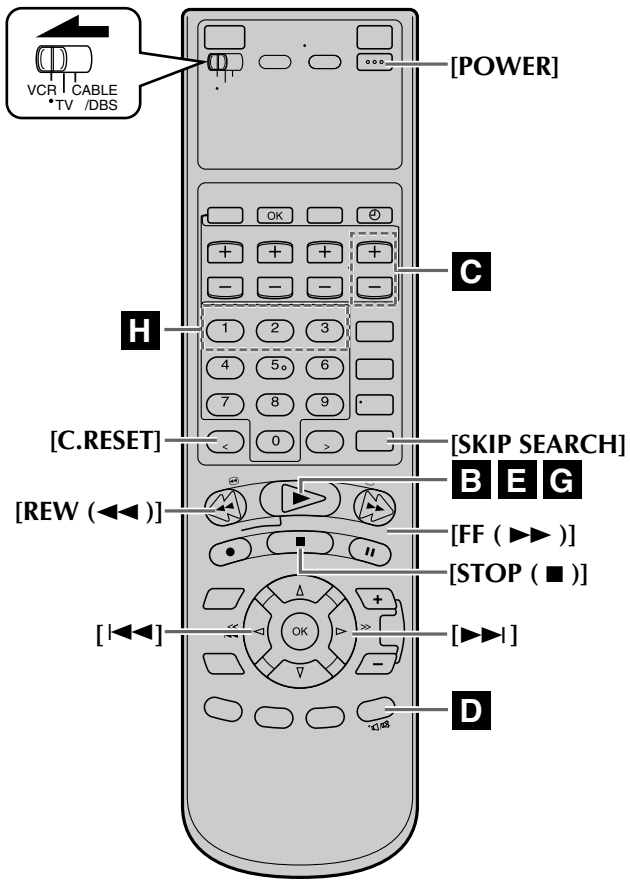
To turn off the VCR

Press [POWER].

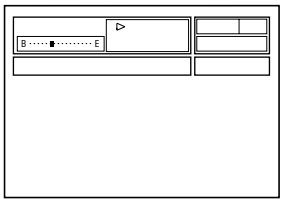
Basic Playback Features

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].





A Checking tape position



The tape position indicator appears on the screen in the following cases:

- When you change the VCR operation mode from the stop mode to fast forward or rewind mode.
- When you perform an Index Search (☞ page 11).

The position of " ▮ " in relation to "B" (Beginning) or "E" (End) shows you where you are on the tape.

NOTES:

- *"SUPERIMPOSE" must be set to "ON", or the indicator will not appear (☞ page 39).*
- *It may take a few seconds for the tape position indicator to be displayed.*

To reset the time counter, press [C. RESET] on the Remote. The counter reading becomes "0:00:00". It is also reset when a tape is inserted.

B Playing back tape repeatedly — Repeat Playback

You can play back a tape repeatedly (50 times).

While playing back a tape, press and hold [PLAY (►)] for more than 5 seconds.
The play indicator [▷] on the front display panel starts flashing slowly, and a tape will be played back 50 times.
To stop playback, press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

NOTE:

For a cassette recorded in D-VHS mode, Repeat Playback is not possible if the cassette was recorded in LS3 or LS5 mode.

C Adjusting tracking condition — Tracking Adjustments

Automatic tracking adjustment

This VCR automatically adjusts the tracking condition. Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment

If automatic tracking cannot eliminate noises well during playback, use the manual tracking following the procedures below.

- You can also use the manual tracking during slow motion playback (☞ page 15). During slow motion playback, simply press [CHANNEL +] or [–] on the VCR (or [TV/VCR CH +] or [–] on the Remote) to adjust tracking.

1 Activate manual tracking

Press [CHANNEL +] and [–] on the front panel at the same time during playback.

2 Eliminate the noises on the TV screen

Press [CHANNEL +] or [–].

- Press it briefly for a fine adjustment, or press and hold for a coarse adjustment. Watch the screen and continue adjustment until optimum picture and sound quality are achieved.
- To reactivate automatic tracking, press [CHANNEL +] and [–] on the front panel at the same time. The automatic tracking becomes active again.

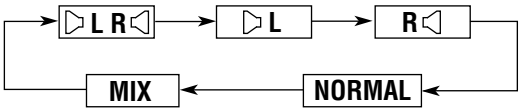
D Selecting monitor sound — Audio Monitor

You can select the desired monitor sound.

While playing back a tape on which stereo sound is recorded, press [A. MONITOR] on the Remote.

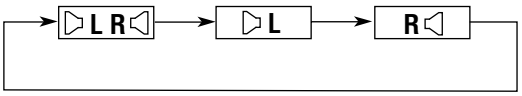
Each time you press the button, the sound changes as follows:

S-VHS/VHS



"L R"	:	Normally select this. Hi-Fi sound is played back.
"L"	:	Sound on the left Hi-Fi channel is played back.
"R"	:	Sound on the right Hi-Fi channel is played back.
"NORMAL"	:	Sound on the normal track is played back.
"MIX"	:	Both sounds on the Hi-Fi track and normal track are mixed and played back.

D-VHS



"L R"	:	Normally select this.
"L"	:	Sound on the left channel is played back.
"R"	:	Sound on the right channel is played back.

NOTES:

- *The above indication appears when "SUPERIMPOSE" is set to "ON" (☞ page 39), though the monitor sound changes in sequence.*
- *If the tape being played back has no Hi-Fi sound track, the normal sound track will be heard regardless of this setting.*

E Automatic operations after rewinding — Next Function Memory

The Next Function Memory tells the VCR what to do after rewinding is complete.

● Ensure that the VCR is in stop mode.

a– For Automatic Playback Start

Press [REW (◄◄)], then press [PLAY (►)] within 2 seconds.

b– For Automatic Power Off

Press [REW (◄◄)], then press [POWER] within 2 seconds.

F Locating beginning of recordings — Index Search

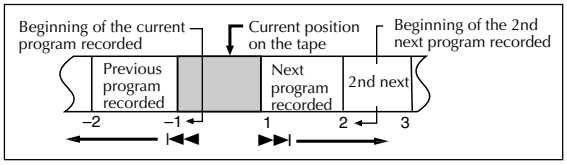
When recording on this VCR, index codes are placed on the tape at the beginning of each recording. You can find and automatically play back from the beginning of any recording using the Index Search function.

1 Start search

While the tape is not running, press [I◄◄] or [►►I] on the Remote.

2 Access distant code

To access a recording of 2 to 9 index codes away, press [I◄◄] or [►►I] repeatedly until the correct number is displayed on the screen (only if "SUPERIMPOSE" is set to "ON" (☞ page 39)). Playback begins automatically when the desired recording is located.



● If you want to find the very beginning of the desired program, press [REW (◄◄)] or [FF (►►)] after playback starts.

NOTE:

An index code is not placed on the tape when recording is resumed from recording pause.

G Skipping unwanted portions — Skip Search

You can skip over (view at high speed) unwanted portions of the tape.

Press [SKIP SEARCH] on the Remote once to 4 times during playback.

Each press initiates a 30-second period of high speed playback (up to 2 minutes). When the specified portion of the tape is skipped, normal playback resumes automatically.

To return to normal playback during Skip Search, press [PLAY (►)].

NOTE:

It is not possible to perform the Skip Search when you play back a D-VHS tape recorded in LS5 mode.

Other Useful functions for playback (S-VHS/VHS only)

You can also use the following functions for playback.

● **"V. CALIBRATION" (☞ page 36)**
When this function is set to "ON", this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures.

● **"PICTURE CONTROL" (☞ page 36)**
This function helps you to adjust the playback picture quality according to your preference.

● **"DIGITAL R3" (☞ page 36)**
This function applies edge correction to the luminance signal to enhance details and provides clear pictures.

● **"VIDEO STABILIZER" (☞ page 36)**
You can automatically correct vertical vibrations in the picture when playing back unstable recordings made on another VCR.

H Repeating wanted portions — Skip Back

You can skip back (view at high speed) wanted portions of the tape.

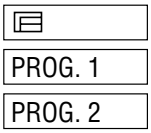
Press 'Number' key (1, 2 or 3) on the Remote during playback.

Each press initiates specified portion period of high speed rewind. When the specified portion of the tape is rewound, normal playback resumes automatically.

Number key	Rewind Time
1	about 05 seconds
2	about 10 seconds
3	about 30 seconds

Some D-VHS tapes may contain the multiple programs, angles, sounds or subtitles. If a tape contains them, the icons appear on the top right corner of the TV screen when you press [OSD].

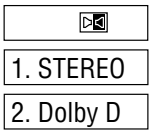
Program Selection



During normal playback, press [TV/VCR CH +/–] on the Remote to select the desired program.

- It is impossible to select the program if the tape does not contain the multiple programs.

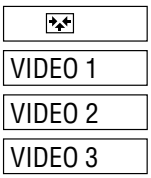
Sound Selection



During normal playback, press [A. MONITOR] on the Remote to select the desired sound.

- It is impossible to select the sound if the tape does not contain the multiple sounds.

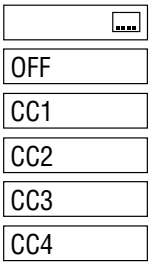
Angle Selection



During normal playback, press the 'Number' key [4] on the Remote to select the desired angle.

- It is impossible to select the angle if the tape does not contain the multiple angles.

Subtitle Selection



During normal playback, press [SUBTITLE] ('Number' key [6]) on the Remote to select the desired subtitle.

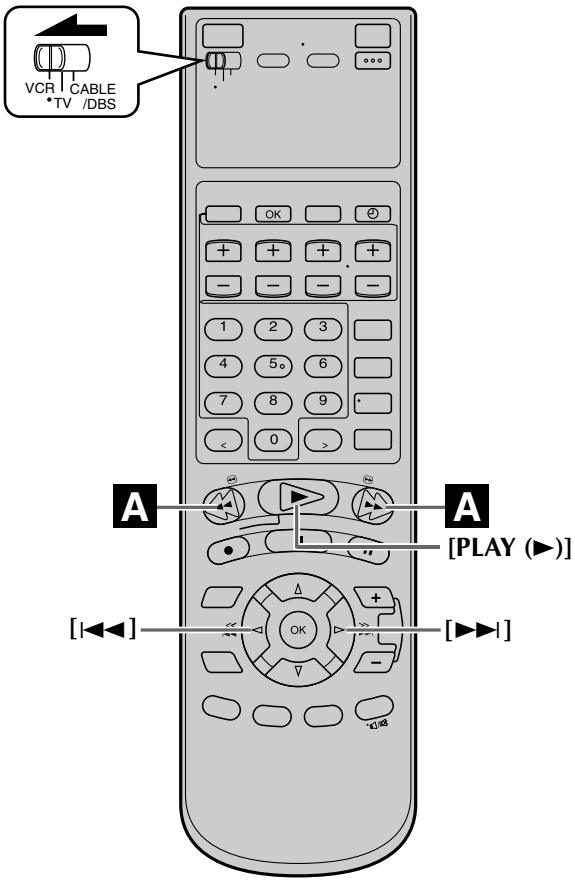
- It is impossible to select the subtitle if the tape does not contain the multiple subtitles.

NOTE:

When you record multiple programs or programs with multiple angles, it is impossible to change program on multiple program channel and angles with the control of this VCR. Select the desired program or angle with the control of the TV.

Special Effect Playback

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



With this VCR, you can enjoy special effect playback such as high-speed search, variable-speed search, and still playback and so on.

A Locating particular scene rapidly — Picture Search

■ High-Speed Picture Search:

Possible during normal playback or still picture playback. You can rapidly locate a particular scene on the tape.

To do forward picture search, press [FF (►►)].
To do reverse picture search, press [REW (◄◄)].
- If you press and hold the button for more than 2 seconds, simply releasing it cancels the picture search, and normal playback resumes.

To resume normal playback, press [PLAY (►)].

NOTES:
- *The high-speed picture search speed of the D-VHS recording is 6 times normal playback speed in HS mode, 12 times in STD mode, 36 times in LS3 mode, 60 times in LS5 mode.*
  The high-speed picture search speed of the S-VHS/VHS recording is 11 times normal playback speed in SP mode, 31 times in EP mode.
- *The picture may be distorted at the part where the playback speed is changed.*
- *The still picture may appear during the high-speed picture search of a tape recorded in D-VHS format on other devices.*

■ Variable-Speed Picture Search (S-VHS/VHS only):

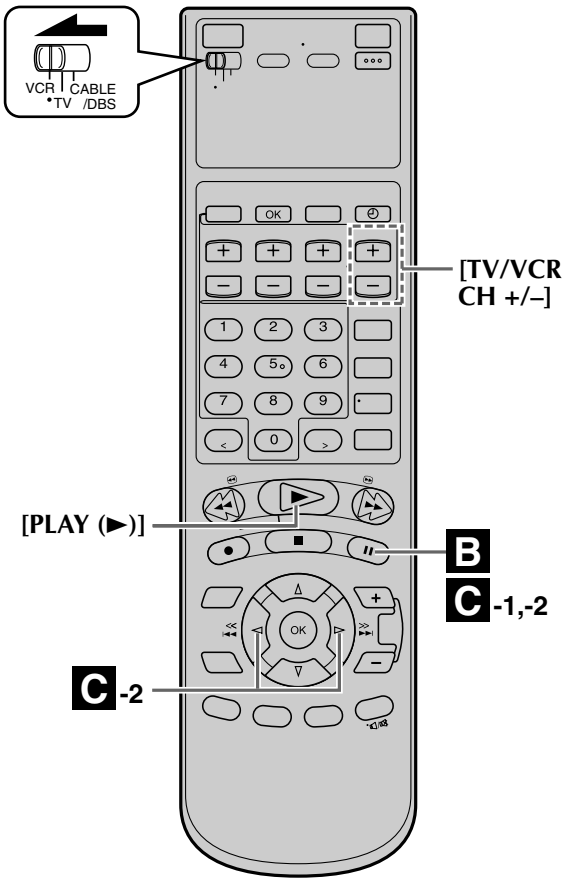
You can change the speed of picture search.

How to use the buttons on the Remote:

To do forward picture search, press [►►I] repeatedly.
Each time you press the button, the search speed increases.
- To decrease the speed during forward picture search (toward normal playback, then reverse picture search), press [I◄◄] repeatedly.

To do reverse picture search, press [I◄◄] repeatedly.
Each time you press the button, the search speed increases during reverse picture search.
- To decrease the speed during reverse picture search (toward normal playback, then forward picture search), press [►►I] repeatedly.

To resume normal playback, press [PLAY (►)].



B Viewing still picture — Still Picture Playback

Press [PAUSE (❚❚)] during normal playback.
Playback is freezed and a still picture appears.

To resume normal playback, press [PLAY (►)].

NOTES:

- *To obtain a noiseless still picture, it may be necessary to adjust tracking in slow motion playback before starting still picture playback.*
- *Manual tracking is possible during still picture playback. During still picture playback, simply press [CHANNEL +] or [–] on the VCR (or [TV/VCR CH +] or [–] on the Remote) to adjust tracking.*

C Viewing still picture frame by frame — Frame-by-Frame Playback (S-VHS/VHS only)

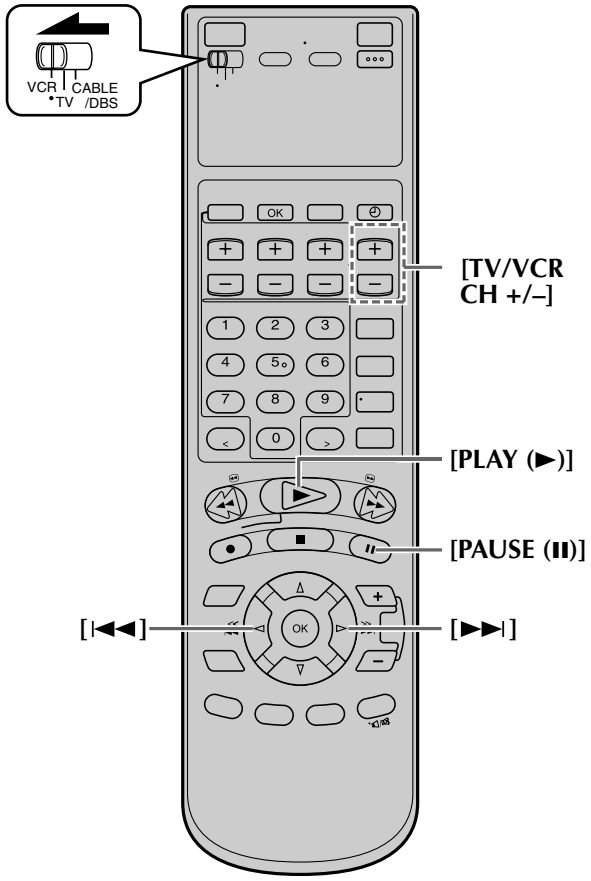
1 Pause during playback

Press [PAUSE (❚❚)].
Playback is freezed and a still picture appears.

2 Advance or reverse still picture

To advance a still picture, press [►►I] or [PAUSE (❚❚)] repeatedly.
To reverse a still picture, press [I◄◄] repeatedly.

To resume normal playback, press [PLAY (►)].



D Viewing slow motion picture
— Slow Motion Playback (S-VHS/VHS only)

During normal playback:
Press [I◄◄] to decrease the playback speed.
Each time you press the button, the speed decreases (toward reverse slow motion playback, then reverse picture search).
- Holding [PAUSE (II)] for more than 2 seconds also starts forward slow motion playback. If you press [PAUSE (II)] again, still picture resumes.

To resume normal playback, press [PLAY (►)].

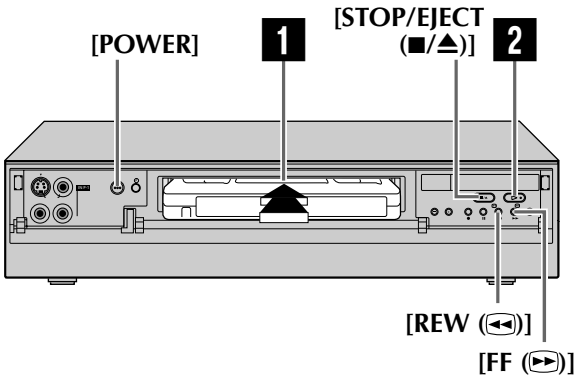
During still picture playback:
Press and hold [►►I] to start forward (or [I◄◄] to start reverse) slow motion playback. When you release the button, slow motion playback stops and a still picture appears.
- Holding [PAUSE (II)] for more than 2 seconds also starts forward slow motion playback. If you press [PAUSE (II)] again, still picture resumes.

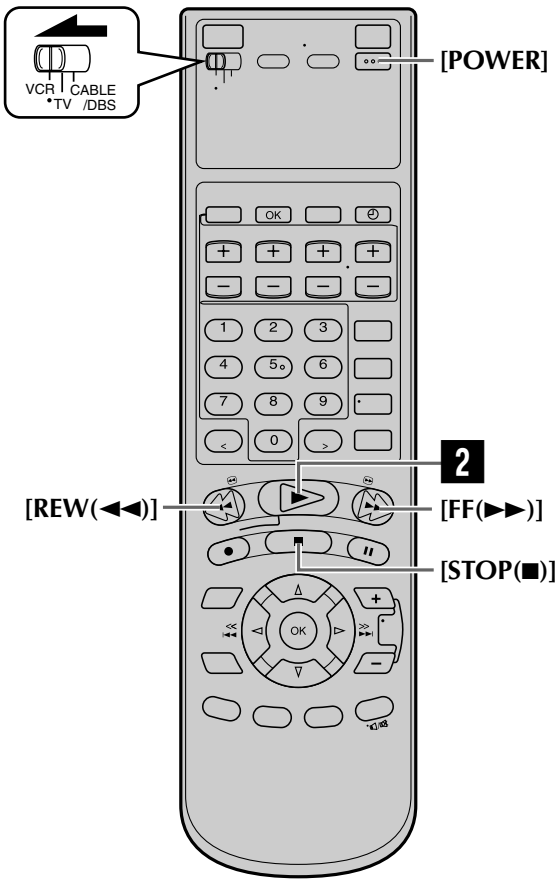
To resume normal playback, press [PLAY (►)].

NOTES:
- *Manual tracking is possible during slow motion playback. During slow motion playback, simply press [CHANNEL +] or [–] on the VCR (or [TV/VCR CH +] or [–] on the Remote) to adjust tracking.*
- *When the picture jitters vertically during slow motion playback, first press [PAUSE (II)] to enter still picture mode. Then adjust tracking by pressing [CHANNEL +] or [–] on the VCR (or [TV/VCR CH +] or [–] on the Remote).*

PRO HD System Playback

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].





This PRO HD system can perform playback of the D-VHS tape recorded by the MPEG2-TS signal.
This VCR can check the tape condition during playback (and recording), and realizes the best possible pictures.

Please refer to next page, when you playback the tape on which the password was set up.

1 Load a D-VHS cassette

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR.
Do not apply too much pressure when inserting.

- The VCR turns on automatically.
- The tape will run for a few seconds while the VCR searches for the tape number. If the tape number is found, it will be shown on the TV screen if "SUPERIMPOSE" is set to "ON" (☞ page 39).
- The counter is reset automatically, however, it is not completely reset to "0:00:00".
- If the cassette's record safety tab has been removed, playback begins automatically.
- The [D-VHS] indicator lights up.

2 Start playback

Press [PLAY (►)].

- Tape speed is automatically detected.

To stop playback

Press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

To rewind the tape (when it is not running)

Press [REW (◄◄)].

To fast-forward (when it is not running)

Press [FF (►►)].

To eject the tape

Press [STOP/EJECT (■/⏏)] on the front panel when the tape is not running.

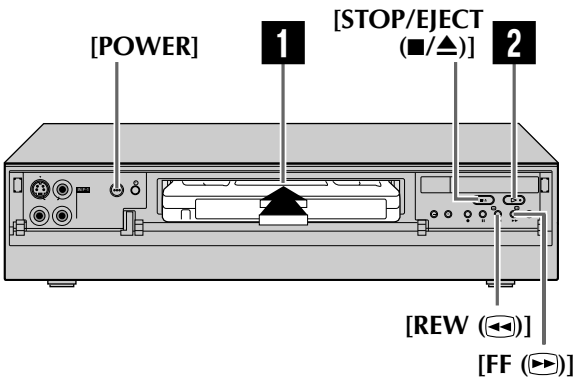
- You can also eject the cassette when the VCR is turned off.

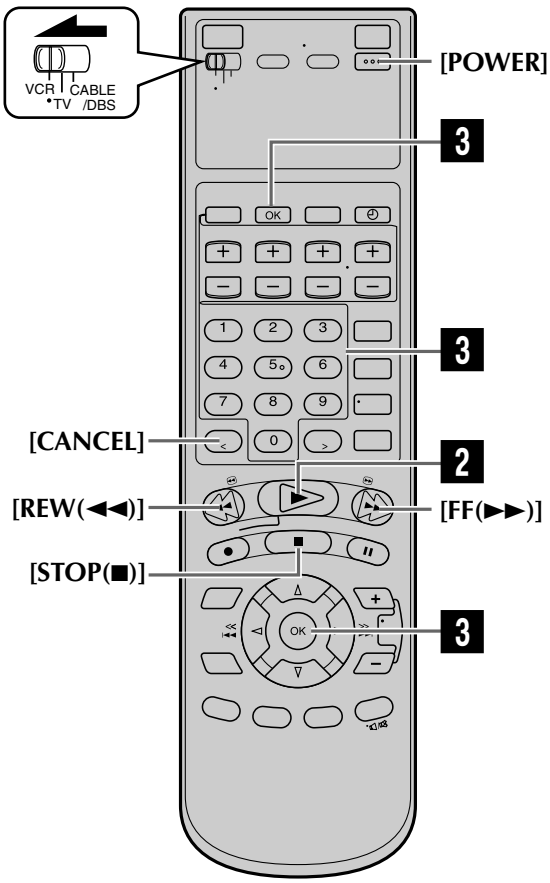
To turn off the VCR

Press [POWER].

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].

Please input a password number when you playback the tape on which the password was set up.
This VCR can check the tape condition during playback (and recording), and realizes the best possible pictures.





1 Load a D-VHS cassette

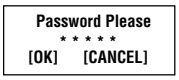
Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR.
Do not apply too much pressure when inserting.

- The VCR turns on automatically.
- The tape will run for a few seconds while the VCR searches for the tape number. If the tape number is found, it will be shown on the TV screen if "SUPERIMPOSE" is set to "ON" (☞ page 39).
- The counter is reset automatically, however, it is not completely reset to "0:00:00".
- If the cassette's record safety tab has been removed, playback begins automatically.
- The [D-VHS] indicator lights up.

2 Start playback

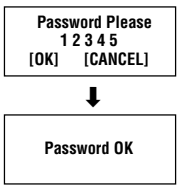
Press [PLAY (►)].

The "Password Please" screen is displayed.
The tape is running but the picture will not appear.



3 Input password number

Press the 5-digit 'Number' keys to input the password number, then press [OK].
"Password OK" screen is displayed and becomes to playback screen about 3 seconds.



To stop playback

Press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

To rewind the tape (when it is not running)

Press [REW (◄◄)].

To fast-forward (when it is not running)

Press [FF (►►)].

To eject the tape

Press [STOP/EJECT (■/⏏)] on the front panel when the tape is not running.

- You can also eject the cassette when the VCR is turned off.

To turn off the VCR

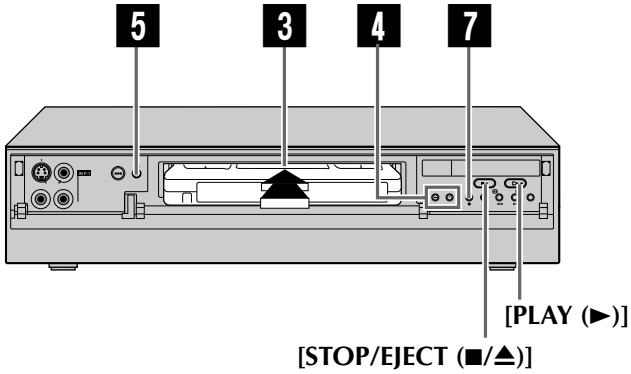
Press [POWER].

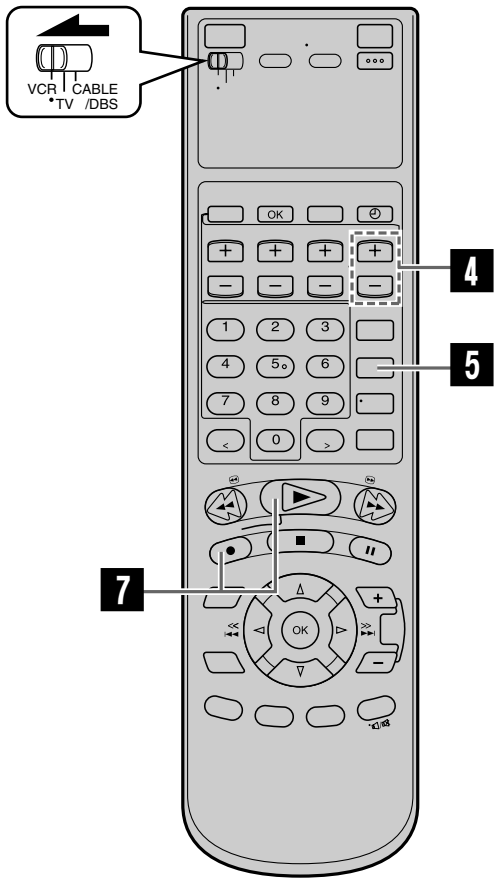
NOTES:

- *Press [CANCEL], when you redo an input from the beginning during a password input.*
- *If the password is different, "Password NG" will be displayed as and the "Password Please" display again.*

Editing

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].





NOTE:

If the 44.1 kHz PCM audio signal is input via DV connector, recording cannot be performed properly.

This VCR supports the copy protection technologies of DTLA (Digital Transmission Licensing Administrator). These technologies are admitted by DTLA.
It is impossible to dub copy-limited signals between the devices which supports copy protection technologies of DTLA. It is impossible to dub to other tapes the program which only one recording is permitted.
When connecting to other devices, only the operation of the devices which supports DTLA is guaranteed. The operation of non-DTLA-supported devices is not guaranteed.

This VCR can check the tape condition during recording (and playback), and realizes the best possible pictures.

In addition, this VCR is equipped with the Video Navigation function, which allows you to quickly locate the programs you have recorded on a tape.
When recording on this VCR, the tapes are automatically numbered so that every tape recorded on this VCR has a different tape number. With this function, the program information such as recording date, start time, auxiliary input ("L-1", "L-2", "F-1" and "I-1" etc.), and recording speed are also automatically stored in the VCR's memory.

- For the Video Navigation function, see page 24.
  To memorize the recording date and start time for the Video Navigation function, the date and clock must be set correctly.

D-VHS Editing

1 Make connections

Refer to 'i.LINK Connections' on page 5.

2 Set up link between this VCR and the JY-HD10 (or another SR-VD400E)

Select i.LINK Connection at the JY-HD10 (or another SR-VD400E).
For details, refer to the respective instruction manuals.

3 Load a D-VHS cassette

Make sure the record safety tab is intact. If not, cover the hole with adhesive tape before inserting the cassette.

- The [D-VHS] indicator lights on the front display panel and the D-VHS recording mode is selected automatically.

4 Select input location (i.LINK)

On the front panel:
Press [CHANNEL +] or [–] to select "I-1" etc.
On the Remote:
Press [TV/VCR CH +] or [–] to select "I-1" etc.

5 Set recording speed

Press [REC SPEED]/[SPEED] to set the recording speed.

- The recording speed changes each time [REC SPEED]/[SPEED] is pressed.

"AUTO" : When recording in HS or STD mode is selected automatically according to the amount of data input (transfer rate) of the program.
"HS" : When picture quality and sound quality is important.
"STD" : When picture quality and recording time are important.
"LS3" : To record for three times longer than in STD mode, with picture quality that is equal to or better than S-VHS.
"LS5" : When recording time is important. To record for five times longer than in STD mode.

For more details, refer to 'About Recording Speed' below.

6 Start playback

Press [PLAY (►)] on the connected device.

NOTE:

If the connected device is equipped with a superimpose/OSD disable feature then set it to "OFF" before starting playback.

7 Start recording

On the front panel:
Press [REC (●)].
On the Remote:
While holding [REC (●)], press [PLAY (►)].

NOTE:

If "108 REC BY HS MODE" appears on the TV screen, refer to 'Error Codes and Messages' on page 51.

Do not connect this VCR to the PC with the i.LINK cable. The operation is not guaranteed.

About Recording Speed

Input Source (Playback device)		**Selectable Recording Speed** (Recording device: This VCR)
i.Link input	D-VHS	Auto (HS/STD/LS3/LS5)*, HS, STD, LS3, LS5
	Digital HD camcorder (MPEG2)	Auto (HS/STD)*, HS
	Digital HD camcorder (DV format)	HS, STD, LS3, LS5

** Auto mode: The recording speed will be selected automatically according to the amount of data input (the transfer rate) from the i.LINK connector.*

NOTES:

- *When dubbing using the i.LINK connector, set the recording speed on the recording VCR to the same speed as the source tape on the playback VCR.*
- *When "AUTO" is selected for the recording speed, "AUTO" and the selected speed appear on the front display panel in turn.*

S-VHS/VHS Editing

1 Make connections

Refer to 'S-VIDEO/VIDEO Connections' on page 6.

2 Load a cassette

Make sure the record safety tab is intact. If not, cover the hole with adhesive tape before inserting the cassette.

3 Select input location on this VCR

"L-1" or "L-2" — when connecting the device to the [AUDIO/VIDEO] or [AUDIO/S VIDEO] input connectors on the rear panel.

"F-1" — when connecting the device to the [AUDIO/VIDEO] or [AUDIO/S VIDEO] input connectors on the front panel.

On the front panel:
Press [CHANNEL +] or [–].
On the Remote:
Press [TV/VCR CH +] or [–].

NOTES:

- *When using this VCR as the recording VCR, set the video input terminal setting correctly (☞ page 38).*
- *When using this VCR as the playback VCR for editing, set "DIGITAL R3" to "OFF" (☞ page 36).*

4 Set recording speed

Press [REC SPEED]/[SPEED] to set the recording speed.

Input Source (Playback device)		Selectable Recording Speed (Recording device: This VCR)
Analog input	D-VHS	HS, STD, LS3, LS5
	S-VHS/VHS	SP, EP

5 Select video input terminal

Access the "IN/OUT FUNCTION" screen (☞ page 38).
When using [S VIDEO] terminal, set "FRONT AUX F-1" (or "REAR AUX L-1 (or L-2)" if you use the connectors on the rear) to "S-VIDEO".
When using [VIDEO] terminal, set "FRONT AUX F-1" (or "REAR AUX L-1 (or L-2)" if you use the connectors on the rear) to "VIDEO".

6 Set "PICTURE CONTROL" to "EDIT"

Access the "VIDEO FUNCTION" screen (☞ page 36).

7 Start playback

Press [PLAY (►)] on the connected device.

NOTE:

If the connected device is equipped with a superimpose/OSD disable feature then set it to "OFF" before starting playback.

8 Start recording

On the front panel:
Press [REC (●)].
On the Remote:
While holding [REC (●)], press [PLAY (►)].

- If "V. CALIBRATION" is set to "ON" (default setting: ☞ page 36), this VCR checks the tape condition for about seven seconds, then starts recording. This means that the first seven seconds of the program will not be recorded. If this is inconvenient for you, follow the steps below:
  ❶ Press [REC (●)] and [PAUSE (❚❚)] to start Video Calibration.
  ❷ Then press [PLAY (►)] to start recording after Video Calibration is complete.

It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.

To pause recording

Press [PAUSE (❚❚)]. To resume recording, press [PLAY (►)].

To stop recording

Press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

To rewind the tape (when it is not running)

Press [REW (◄◄)].

To fast-forward the tape (when it is not running)

Press [FF (►►)].

To eject the tape

Press [STOP/EJECT (■/⏏)] on the front panel when the tape is not running.

- You can also eject the cassette when the VCR is turned off.

To turn off the VCR

Press [POWER].

NOTES:

- *Be sure to select "AUTO" for "PICTURE CONTROL" (or "NORM" when "V. CALIBRATION" is set to "OFF") after you finish dubbing the tapes (☞ page 36).*
- *It is impossible to perform dubbing properly only with an audio cable. Connect also the video or S-video cable.*

To use a Master Edit Control-equipped JVC NTSC camcorder

If you are using a JVC NTSC camcorder equipped with the Master Edit Control, you can control the VCR from the camcorder.

1 Access the "ADDITIONAL" screen (☞ page 39), then set "AV COMPU-LINK" to "OFF" after performing step **6** on page 20.
- The [REMOTE PAUSE/AV COMPULINK] connector works as a Remote Pause connector when "AV COMPU-LINK" is set to "OFF".
- For details, refer to the camcorder's instruction manual.

2 Engage the VCR's recording pause mode.

Various connections for editing tapes

The following three methods can be used for editing tapes.

- ***VHS to S-VHS editing (VIDEO-VIDEO connection):*** *Although the picture quality is inherently limited by the original VHS quality, the edited tape has better picture quality than those made by VHS-to-VHS editing.*
- ***S-VHS to VHS editing (VIDEO-VIDEO connection):*** *Since the original source is recorded in S-VHS mode, the edited tape has better picture quality than those made by VHS-to-VHS editing.*
- ***S-VHS to S-VHS editing (S-VIDEO connection):*** *Original picture quality of S-VHS made can be duplicated with minimal picture degradation. This is the best editing method you can use on S-VHS VCRs.*

Other useful functions for recording

You can also use the following functions for recording.

- **"V. Calibration" (S-VHS/VHS only) (☞ page 36)**

When this function is set to "ON", this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures.

- **S-VHS Recording Mode (☞ page 40)**

This VCR allows you to record on a D-VHS and S-VHS tape with VHS picture quality.

- **S-VHS ET (☞ page 41)**

This function allows you to record on VHS tapes with S-VHS picture quality. Tapes recorded using this function can be played back on a VCR equipped with the S-VHS ET function.

NOTE:

When the channel is changed on the VCR;

- *The "STEREO" indication appears on the screen for about 5 seconds if the program is a stereo broadcast.*

Compatibility Of Cassettes And Recording Mode

Cassette	Recording Mode		
	D-VHS	S-VHS	VHS
D-VHS	Yes	Yes	Yes
S-VHS	No	Yes	Yes
VHS	No	Yes*	Yes

** To record on the VHS cassette with S-VHS quality, use the S-VHS ET function (☞ page 41).*

NOTES:

- *The D-VHS (MTP), S-VHS, S-VHS ET and VHS mode recordings are possible with this VCR.*
- *To record in the D-VHS mode, use a D-VHS cassette.*
- *To record in the S-VHS/VHS mode, you can use a D-VHS, S-VHS or VHS cassette.*

To record in S-VHS mode on D-VHS tapes:
Press [D-VHS] to turn off the [D-VHS] indicator. Then, set "S-VHS MODE" to "ON" (☞ page 40).

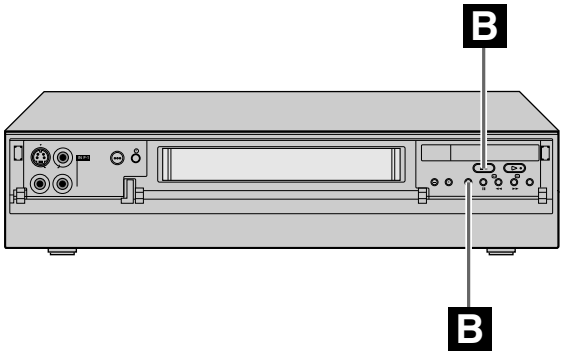
To record in VHS mode on D-VHS tapes:
Press [D-VHS] to turn off the [D-VHS] indicator. Then, set "S-VHS MODE" to "OFF" (☞ page 40).

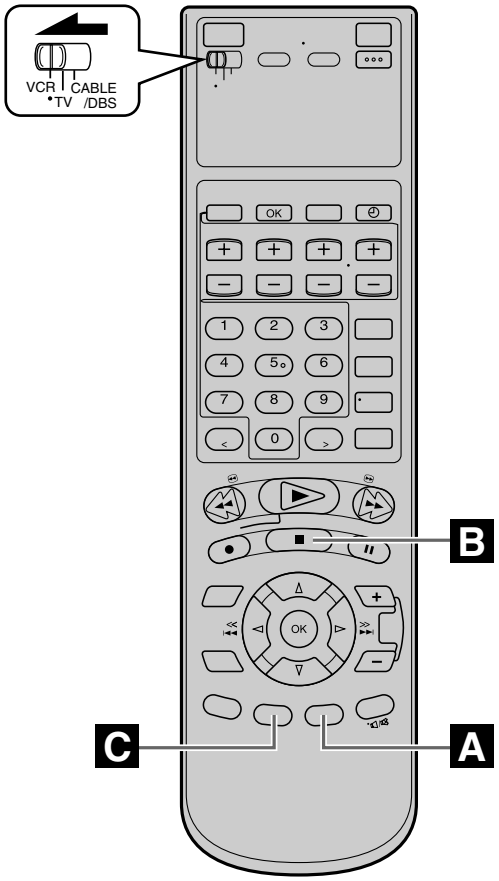
Accidental erasure prevention

To prevent accidental recording on a recorded cassette, remove its record safety tab.
To record on it later, cover the hole with adhesive tape.

Editing Features

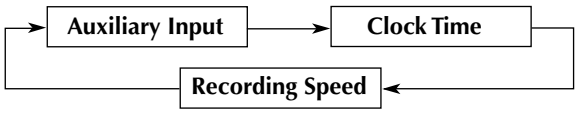
- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].





A Changing display information

Press [DISPLAY] during recording or recording pause.
Each time you press the button, the front display panel shows the auxiliary input, clock time, and the recording speed in sequence.



- To display the VCR status including the time counter, the channel number and the clock time on the TV screen, see 'Showing on-screen display' below.

B Specifying recording length — Instant Timer Recording (ITR)

You can easily specify the recording length from 30 minutes to 8 hours and the VCR shuts off after recording is finished.

During recording, press [REC (●)] on the front panel repeatedly until the recording length you want appears on the front display panel.
The record [○] indicator starts flashing.
Each time you press the button, recording length increases in 30-minute intervals (up to 8 hours).
To cancel an ITR, press [STOP (■)] on the Remote or [STOP/EJECT (■/⏏)] on the front panel.

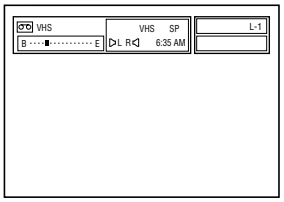
C Showing on-screen display

When "SUPERIMPOSE" is set to "ON" (☞ page 39), you can see the current VCR status on the TV screen.

- For more detailed information about the on-screen display, see page 57.

1 Display VCR status on TV screen

During recording or recording pause, press [OSD] on the Remote. All indications corresponding to the current VCR status are displayed for 5 seconds. The time counter remains on the screen indicating the elapsed time.



- The indications are not recorded.

2 Exit on-screen display

Press [OSD] again.

NOTES:

- *The subtitles will not appear while the on-screen display is displayed.*
- *If the VCR is in recording pause mode, "●II" is always displayed.*
- *The VCR status can be also displayed during playback.*
- *Even if "SUPERIMPOSE" is set to "OFF" (☞ page 39), the on-screen display appears when the VCR plays back the blank portion of a tape. However, on-screen display does not appear when the input location is selected and no signal is input.*

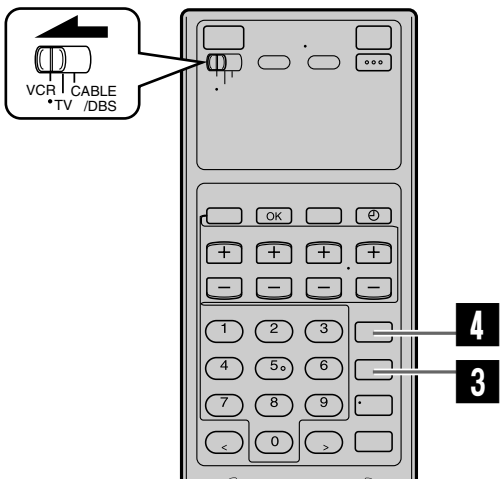
Auto Recording

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].

This function allows you to automatically record a program which is timer-programmed on your NTSC device.

Preparation: Connect a NTSC device to the [AUDIO/VIDEO IN] or [S VIDEO IN (L-1)] connectors* on the rear; otherwise, you cannot use this function.

** To use these connectors, you have to select which one to use (☞ page 38).*



1 Set timer program on NTSC device

- For timer programming method, refer to the manual supplied with the NTSC device.

2 Load a cassette

Make sure the record safety tab is intact.

3 Set recording speed

Press [REC SPEED]/[SPEED] to set the recording speed.

4 Engage Auto Recording standby mode

Turn off the NTSC device.
Press and hold [REC LINK] on the Remote for more than 2 seconds.
The VCR turns off automatically, [L-1] and [◴] appear on the front display panel (Auto Recording standby mode).
When the NTSC device outputs a signal, the VCR starts recording and [L-1] blinks, the [◴] and record [○] indicator light up. The VCR stops recording and powers off when the NTSC device stops outputting a signal.

- This VCR will enter into Auto Recording standby mode after recording is finished.
- To release the Auto Recording standby mode, press [REC LINK]. [L-1] and [◴] disappear.

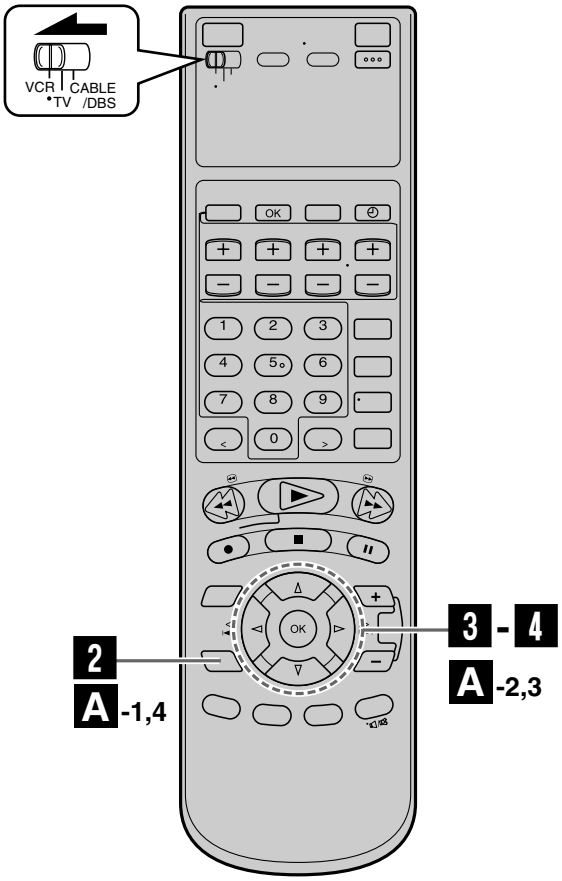
IMPORTANT: Be sure not to turn on the NTSC device before the program starts broadcasting; otherwise, the VCR will start recording when the NTSC device is turned on.

NOTES:

- *If you turn off this VCR while Auto Recording is in progress, recording stops.*
- *Video Calibration (☞ page 36) does not work while Auto Recording is in progress.*
- *The VCR may not record a short portion at the beginning of the program or may record slightly longer than the actual length of the program when Auto Recording method is used.*
- *If you engage the Auto Recording standby mode while the NTSC device is turned on, the VCR will not start Auto Recording, and [L-1] and [◴] blink on the front display panel. When you turn off the NTSC device, [L-1] and [◴] light up and the VCR enters the Auto Recording standby mode.*
- *If you have connected another component other than a NTSC device to the [AUDIO/VIDEO IN] or [S VIDEO IN (L-1)] connectors, be sure not to engage the Auto Recording standby mode; otherwise, the VCR will start recording when the connected component is turned on.*
- *If the [L-1] blinks quickly on the front display panel in the Auto Recording standby mode (even though your NTSC device is turned off), Auto Recording will not work properly.*

Navigation Playback

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



This function is useful when you want to quickly find programs you have recorded on a tape using this VCR. This function allows you to select a program to watch, and then automatically search for the beginning of the program.

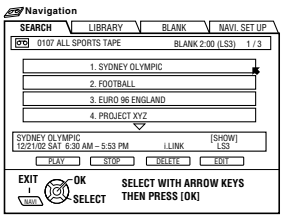
1 Load a cassette

Insert a tape recorded on this VCR.

- The VCR turns on automatically.
- The tape will run for a few seconds while the VCR searches for the tape number recorded. If tape number is found, it will be shown on the TV screen if "SUPERIMPOSE" is set to "ON" (☞ page 39).
- The counter is reset automatically, however, it is not completely reset to "0:00:00".
- If the cassette's record safety tab has been removed, playback begins automatically.

2 Access Video Navigation screen

Press [NAVI].



- After pressing [NAVI], it may take a few seconds to access the Title screen while the VCR searches for the Video Navigation information.

3 Select program

Press [△▽] to select the program you want to watch, then press [OK].

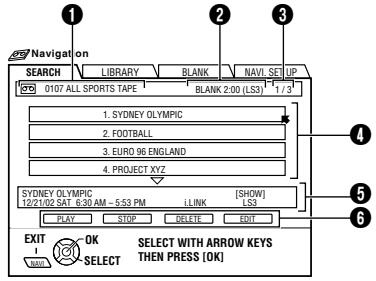
4 Start playback

Press [◁ ▷] to move the arrow to "PLAY", then presss [OK].
Playback starts automatically after the selected program is located.

NOTES:

- *If you press [NAVI] while Video Navigation is deactivated, the Navigation Set Up screen appears. Set "NAVIGATION" to "ON" (☞ page 25).*
- *Video Navigation playback is possible only with the tape recorded on this VCR.*
- *To record the date and time as the program title in this VCR's memory, make sure the VCR's clock is set correctly before recording.*
- *To record the program information in this VCR's memory, you must record each program for over the minimum recording time; 5 min for the D-VHS (HS) mode, 10 min for the D-VHS (STD) mode, 30 min for the D-VHS (LS3) mode, 50 min for the D-VHS (LS5) mode, 5 min for the S-VHS/VHS (SP) mode and 15 min for S-VHS/VHS (EP) mode.*
- *Video Navigation may not work properly for some tapes.*
- *During playback or when searching for the beginning of a program, a VCR might find two different tape numbers recorded on a tape. After you remove this tape, the tape will be assigned just one tape number (the smaller one). After this, the higher tape number will be missing from the memory's tape number list.*
- *Tape program information is stored in this VCR's memory. If this VCR's memory is damaged and the program information is lost, it is impossible to restore that information.*
- *After recording a tape on this VCR, write the tape number on a label and affix the label to the tape in order to allow you to find the tape by its number.*
- *The on-screen display is output to the TV with S-VIDEO, VIDEO, COMPONENT VIDEO signal in 480i image format.*

How to read the Video Navigation screen



❶ Tape number and tape title
❷ Maximum blank time on the tape
❸ [Page No./Total Page No.] (only 4 programs can be shown at a time)
❹ Program title included on a tape
❺ The detailed program information currently selected (date, auxiliary input, category, start time, end time, recording speed)
❻ Operational commands

Example

SYDNEY OLYMPIC 8:00 (LS3)	*BLANK 2:00 (LS3)*	*EURO 96 ENGLAND 4:00 (LS3)*	*BLANK 1:00 (LS3)*

Blank part*

* *"BLANK" appears for non-recorded part, the part whose information has been deleted manually (☞ page 34), or the part where new program has been recorded.*

A Deactivating Video Navigation

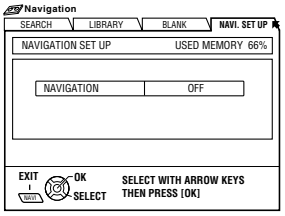
If you do not want to store program information, you can deactivate the Video Navigation function.

1 Access Video Navigation screen

Press [NAVI].

2 Access Navigation Set Up screen

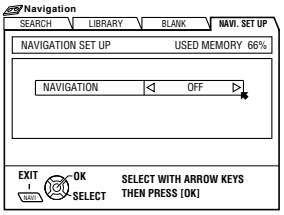
Press [△▽ ◁ ▷] to move the arrow to "NAVI. SET UP", then press [▽] or [OK].



3 Deactivate Video Navigation

Press [◁ ▷].

- Each time you press [◁ ▷], Video Navigation turns "ON" or "OFF".



4 Return to normal screen

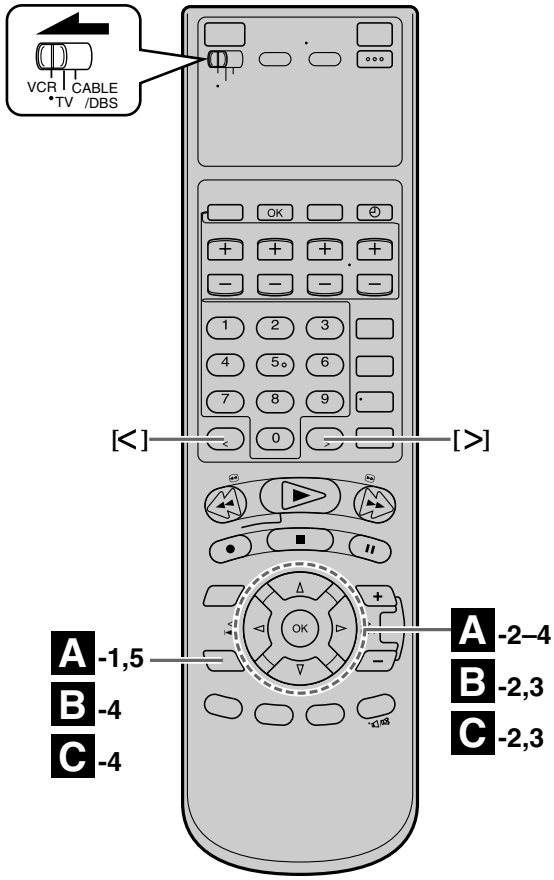
Press [NAVI].

NOTE:

If you press [NAVI] when a cassette is not loaded, "NO TAPE!" appears on the TV screen. If the VCR does not recognize the tape number of the loaded cassette, "UNRECOGNIZED TAPE NUMBER!" appears on the TV screen.

Finding Tapes

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



To play back a selected program on the list screen

1. Select the program that you want to watch, then press [OK].
2. Insert the corresponding tape.
3. Press [OK] again with the arrow on “SEARCH”.
4. Confirm that the desired program is highlighted, then press [OK].
   - Playback starts automatically after the selected program is located.

You can find a tape you want using Video Navigation. You have four methods to find tapes; by tape number, by program title, by category, by recording date, and by tape remaining time.

A Finding by tape number

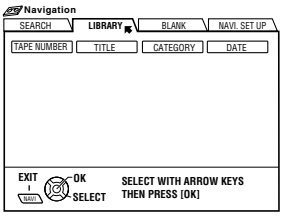
Use the Remote to do the following operations.

1 Access Video Navigation screen

Press [NAVI].

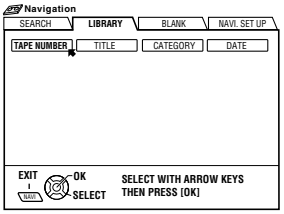
2 Access Library screen

Press [△▽ ◁ ▷] to move the arrow to “LIBRARY”, then press [▽] or [OK].

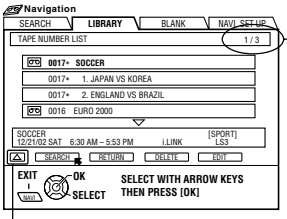


3 Access tape number list screen

Press [◁ ▷] to move the arrow to “TAPE NUMBER”, then press [OK].
The tape number list screen appears, being sorted by the tape numbers.



4 Confirm tape number lists



1st page (out of 3 pages in this example) of the tape number lists is shown.

Switch for changing the order

- “*” is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].
- To play back the desired program, refer to ‘To play back a selected program on the list screen’ in the left column.

5 Return to normal screen

Press [NAVI].

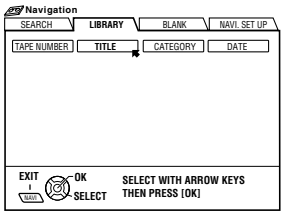
B Finding by program title

Use the Remote to do the following operations.

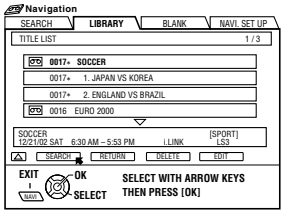
1 Follow steps 1 to 2 on page 26, then go to the following steps

2 Access title screen

Press [◁ ▷] to move the arrow to “TITLE”, then press [OK].



3 Confirm lists



- “*” is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].
- To play back the desired program, refer to ‘To play back a selected program on the list screen’ on page 26.

4 Return to normal screen

Press [NAVI].

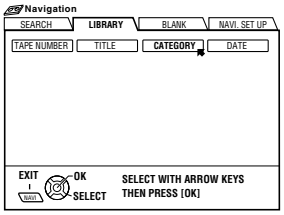
C Finding by category

Use the Remote to do the following operations.
To find a program by category, be sure to select program category in advance (☞ page 33).

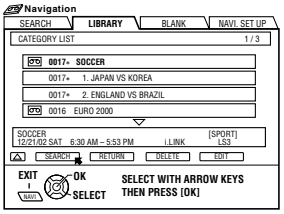
1 Follow steps 1 to 2 on page 26, then go to the following steps

2 Access category screen

Press [◁ ▷] to move the arrow to “CATEGORY”, then press [OK].



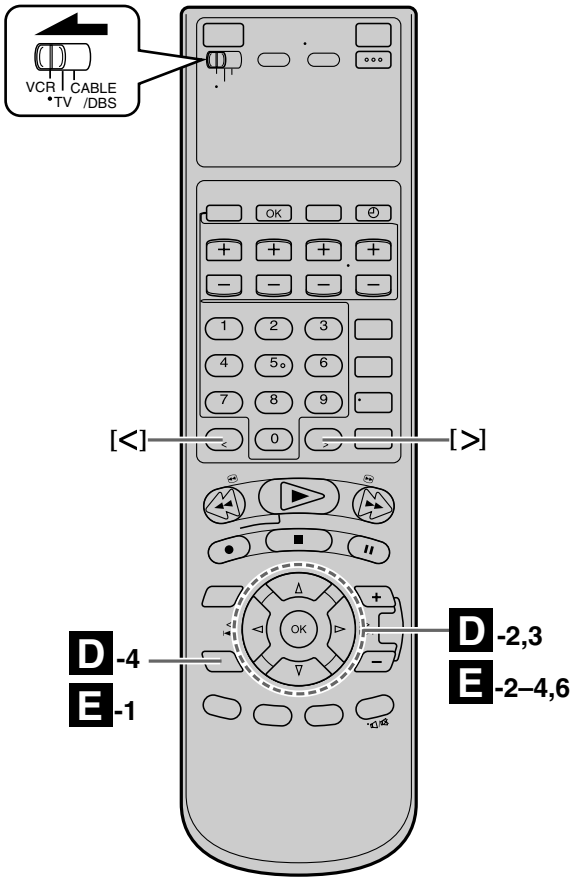
3 Confirm lists



- “*” is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].
- To play back the desired program, refer to ‘To play back a selected program on the list screen’ on page 26.

4 Return to normal screen

Press [NAVI].



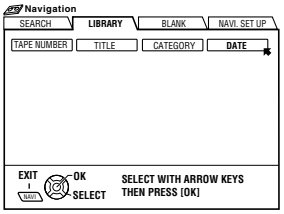
D Finding by recording date

Use the Remote to do the following operations.

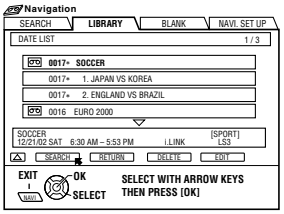
1 Follow steps 1 to 2 on page 26, then go to the following steps

2 Access date screen

Press [◁ ▷] to move the arrow to “DATE”, then press [OK].
The list screen appears, being sorted by the recording date.



3 Confirm lists



- “∗” is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].
- To play back the desired program, refer to ‘To play back a selected program on the list screen’ on page 26.

4 Return to normal screen

Press [NAVI].

Finding blank space

You can find a tape whose remaining time is enough for a program you want to record.

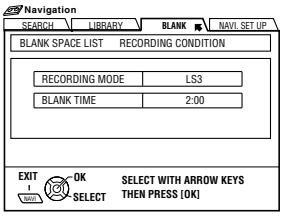
Use the Remote to do the following operations.

1 Access Video Navigation screen

Press [NAVI].

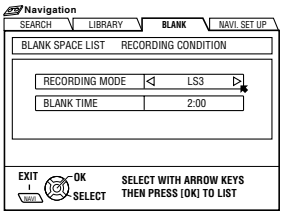
2 Access Blank Space List screen

Press [△▽ ◁ ▷] to move the arrow to “BLANK”, then press [▽] or [OK].



3 Set condition

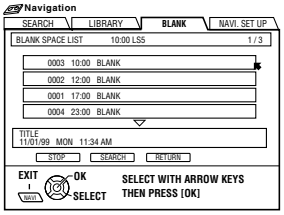
Press [△▽] to move the arrow to “RECORDING MODE”, then press [◁ ▷] to select the recording speed.
Press [△▽] to move the arrow to “BLANK TIME”, then press [◁ ▷] to select the blank time.
Then press [OK].



4 Select tape number

Press [△▽], then press [OK].

- To go to another page of the lists, press [<] or [>].



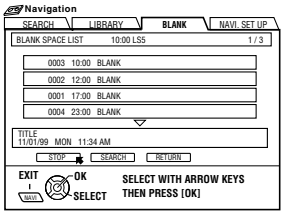
5 Load a cassette

Insert the cassette whose number you have found in step **4**.

6 Select blank

Press [◁ ▷] to move the arrow to “STOP”, then press [OK].

- The VCR will start search for the beginning of the blank part, then stop.

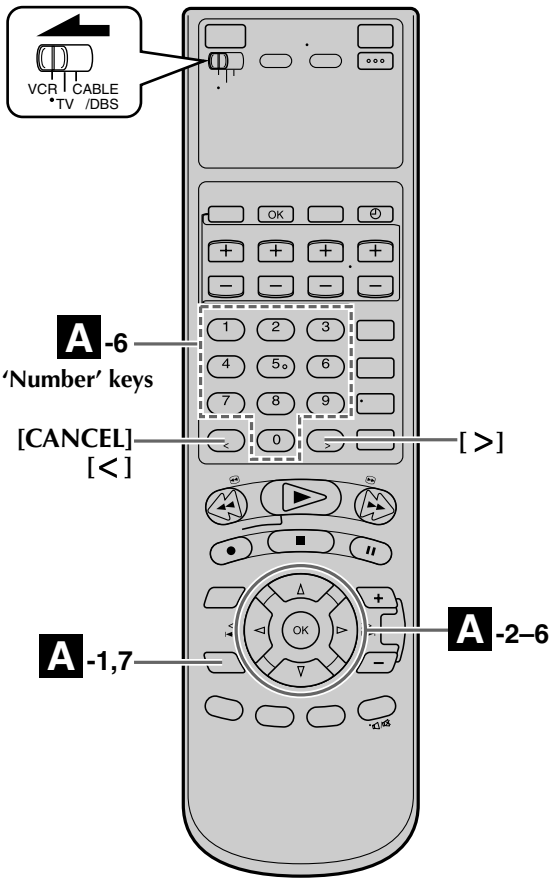


7 Prepare for recording

See page 18 for recording.

Editing Titles

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



When you record a TV program on this VCR, the VCR automatically records the recording start time, date, and channel in each program title. If the tape is recorded for the first time, the tape number and the date and time are recorded in the tape title. You can then edit the tape title and the program titles as you like. You can also edit the category in the program title.
In short, you can use the Video Navigation function to create your own video tape library.

A Editing tape title

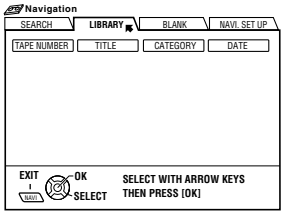
When you want to edit the tape title, follow the procedure below by using the Remote.

1 Access Video Navigation screen

Press [NAVI].

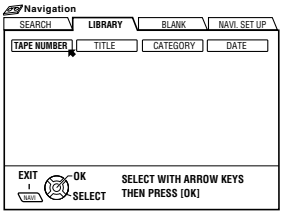
2 Access Library screen

Press [△▽ ◁ ▷] to move the arrow to "LIBRARY", then press [▽] or [OK].



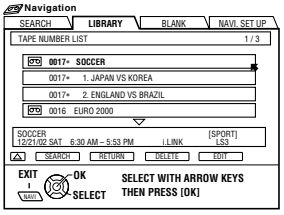
3 Access tape number list screen

Press [◁ ▷] to move the arrow to "TAPE NUMBER", then press [OK].
The tape number list screen appears, being sorted by the tape numbers.



4 Select tape number

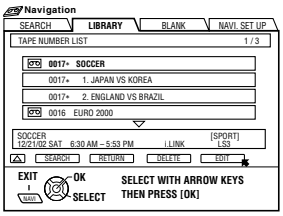
Press [△▽] to select the tape number for which you want to edit the title, then press [OK].



- "*" is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].

5 Access edit screen

Press [◁ ▷] to move the arrow to “EDIT”, then press [OK].

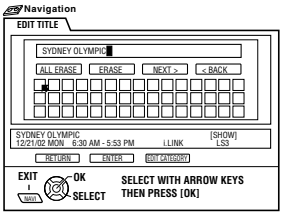


6 Enter title

1 Press [△▽ ◁ ▷] to move the arrow on the desired character or symbol, then press [OK].

OR

Press the ‘Number’ keys to enter the title.



- For entering the characters as the title, refer to ‘How to enter the characters and symbols’ on the right column. (In this example, enter “JVC NEWS”.)

2 Press [△▽ ◁ ▷] to move the arrow to “ENTER”, then press [OK].

7 Return to normal screen

Press [NAVI].

How to enter the characters and symbols with the number keys on the Remote

Press the ‘Number’ keys, then press [>] to enter each character. Refer to the example below.

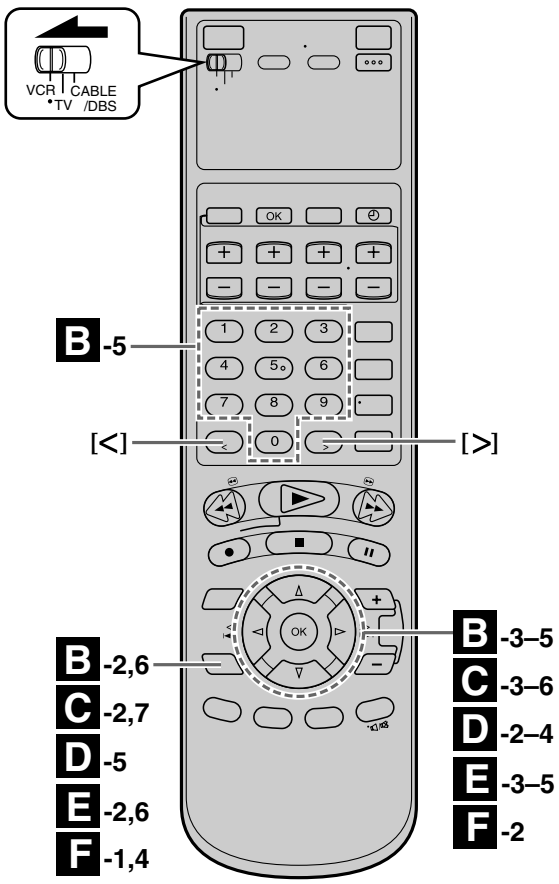
(Ex.) Enter “JVC NEWS”.

① Press [5 (JKL)] once to enter “J”, then press [>].
② Press [8 (TUV)] three times to enter “V”, then press [>].
③ Press [2 (ABC)] three times to enter “C”, then press [>].
④ Press [0 (␣)] twice to enter “␣ (space)”, then press [>].
⑤ Press [6 (MNO)] twice to enter “N”, then press [>].
⑥ Press [3 (DEF)] twice to enter “E”, then press [>].
⑦ Press [9 (WXYZ)] once to enter “W”, then press [>].
⑧ Press [7 (PQRS)] four times to enter “S”, then press [>].

NUMBER KEY	CHARACTERS
1	. , ? – + * / [ ] 1
2	A B C a b c 2
3	D E F d e f 3
4	G H I g h i 4
5	J K L j k l 5
6	M N O m n o 6
7	P Q R S p q r s 7
8	T U V t u v 8
9	W X Y Z w x y z 9
0	0 _(space)

NOTES:

- *If you want to delete a character, select the character, then press [CLEAR] or press [OK] with the arrow on “ERASE”.*
- *If you want to delete all characters, press [OK] with the arrow on “ALL ERASE”.*



B Entering or Editing program title

When you want to edit the program title, follow the procedure below by using the Remote.

1 Load a cassette

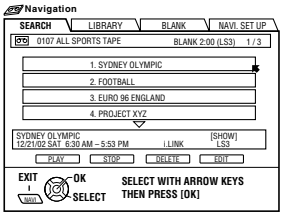
Insert a tape on which there is a program you want to edit.

2 Access Video Navigation screen

Press [NAVI].

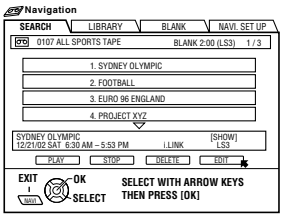
3 Select program

Press [△▽] to select the program you want to edit, then press [OK].

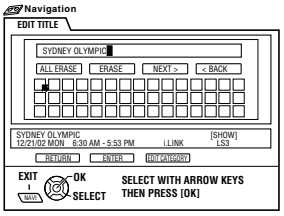


4 Access edit screen

Press [△▽] to move the arrow to “EDIT”, then press [OK].



5 Enter title



1 Press [△▽ ◁ ▷] to move the arrow on the desired character or symbol, then press [OK].

OR

Press the ‘Number’ keys to enter the title.

- For entering the characters as the title, refer to ‘How to enter the characters and symbols’ on page 31. (In this example, enter “JVC NEWS”.)

2 Press [△▽ ◁ ▷] to move the arrow to “ENTER”, then press [OK].

6 Return to normal screen

Press [NAVI].

C Editing program category

When you want to change the program category, follow the procedure below by using the Remote.

1 Load a cassette

Insert a tape on which there is a program you want to edit.

2 Access Video Navigation screen

Press [NAVI].

3 Select program

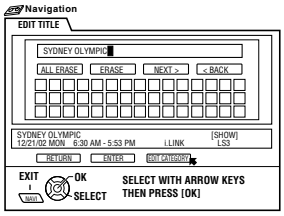
Press [△▽] to select the program you want to edit, then press [OK].

4 Access edit screen

Press [◁ ▷] to move the arrow to “EDIT”, then press [OK].

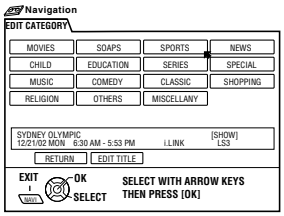
5 Access category screen

Press [△▽◁ ▷] to move the arrow to “EDIT CATEGORY”, then press [OK].



6 Select category

Press [△▽◁ ▷] to select the category you want, then press [OK].



7 Return to normal screen

Press [NAVI].

D Deleting tape information

When you want to delete the entire tape information (information for all recorded programs on the tape), follow the procedure below by using the Remote.

- Tape information for the Video Navigation function is deleted, but the recorded programs will not be erased.

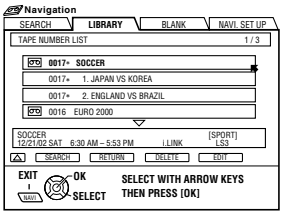
ATTENTION

Once the information is deleted, it is impossible to restore that information.

1 Follow steps 1 to 3 on page 30, then go to the following steps

2 Select tape number

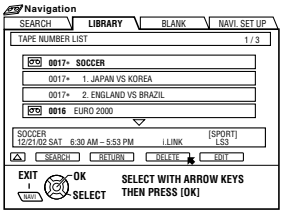
Press [△▽] to select the tape number for which you want to edit the title, then press [OK].



- “*” is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].

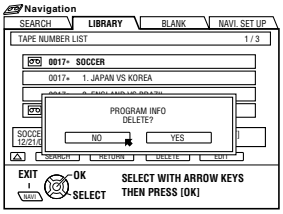
3 Access delete screen

Press [◁ ▷] to move the arrow to “DELETE”, then press [OK].



4 Delete tape information

Press [◁ ▷] to move the highlight bar to “YES”, then press [OK].



5 Return to normal screen

Press [NAVI].

E Deleting program information

When you want to delete the stored information for each recorded program, follow the procedure below by using the Remote.

- Program information for the Video Navigation function is deleted, but the recorded program will not be erased.

ATTENTION
Once the information is deleted, it is impossible to restore that information.

1 Load a cassette

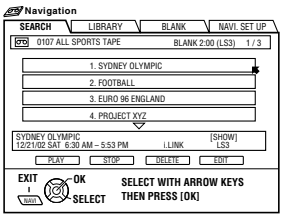
Insert a tape on which there is a program you want to edit.

2 Access Video Navigation screen

Press [NAVI].

3 Select program

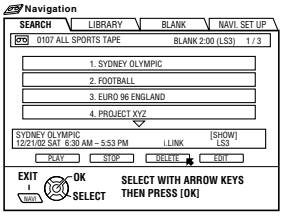
Press [△▽] to select the program you want to edit, then press [OK].



- "∗" is displayed beside the tape number of the loaded cassette.
- The cassette mark is displayed on the left of the tape title. The items without the cassette marks are the program titles included in the tape.
- To go to another page of the lists, press [<] or [>].

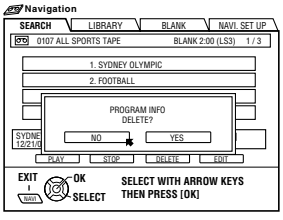
4 Access delete screen

Press [◁ ▷] to move the arrow to "DELETE", then press [OK].



5 Delete program information

Press [◁ ▷] to move the highlight bar to "YES", then press [OK].



6 Return to normal screen

Press [NAVI].

F Checking memory

You can check the amount of recorded information in the VCR's memory.

1 Access Video Navigation screen

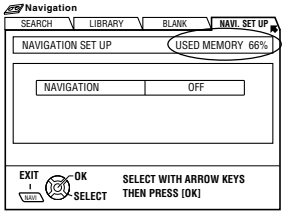
Press [NAVI].

2 Access Navigation Set Up screen

Press [△▽ ◁ ▷] to move the arrow to "NAVI. SET UP".

3 Check memory

The percentage of the used memory is displayed.



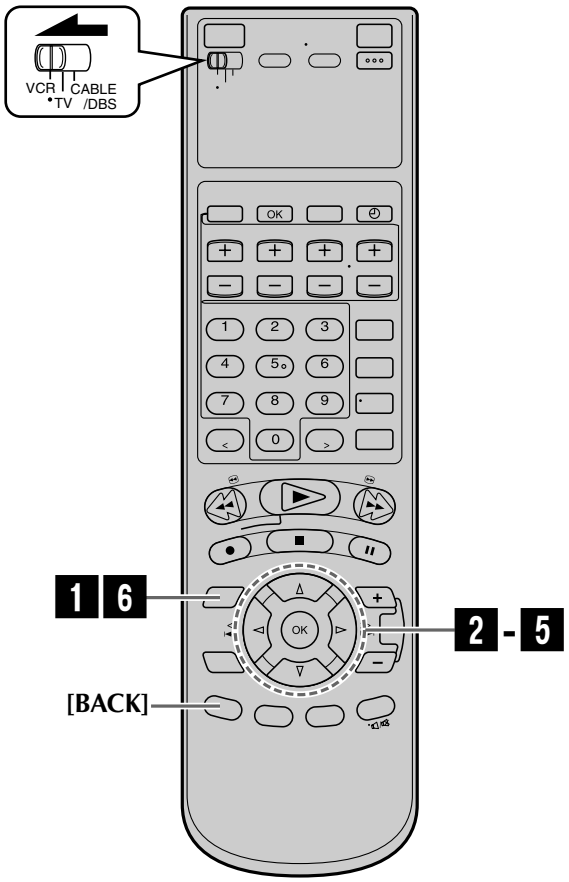
4 Return to normal screen

Press [NAVI].

If memory is full, you have to delete unwanted information to store more information in the VCR's memory.

Useful Function Settings

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



You can use the other useful function settings on the Function Set Up screens by following the procedure described below.
The table below shows the structure of the menu system.

"FUNCTION SET UP"	"VIDEO FUNCTION" (☞ page 36) "AUDIO FUNCTION" (☞ page 37) "IN/OUT FUNCTION" (☞ page 38) "ADDITIONAL" (☞ page 39)

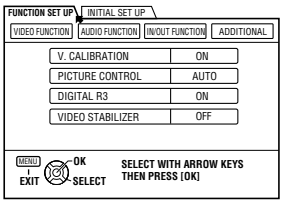
- For the functions you can set on the Function Set Up screen, see pages 35 to 41.

1 Access Main Menu screen

Press [MENU].

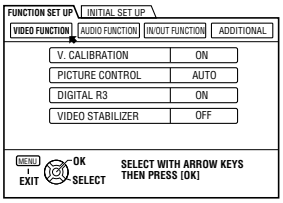
2 Access Function Set Up screen

Press [◁ ▷] to move the arrow to "FUNCTION SET UP", then press [▽] or [OK].



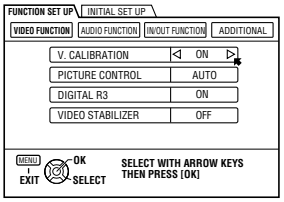
3 Select Function Menu

Press [◁ ▷] to move the arrow to the menu of the function you want to set, then press [▽] or [OK].



4 Select Function

Press [△▽] to move the arrow to the function you want to set.



5 Change setting

Press [◁ ▷].

6 Return to normal screen

Press [MENU].

NOTE:

To go back to a previous screen during settings, press [BACK].

Video settings "VIDEO FUNCTION"

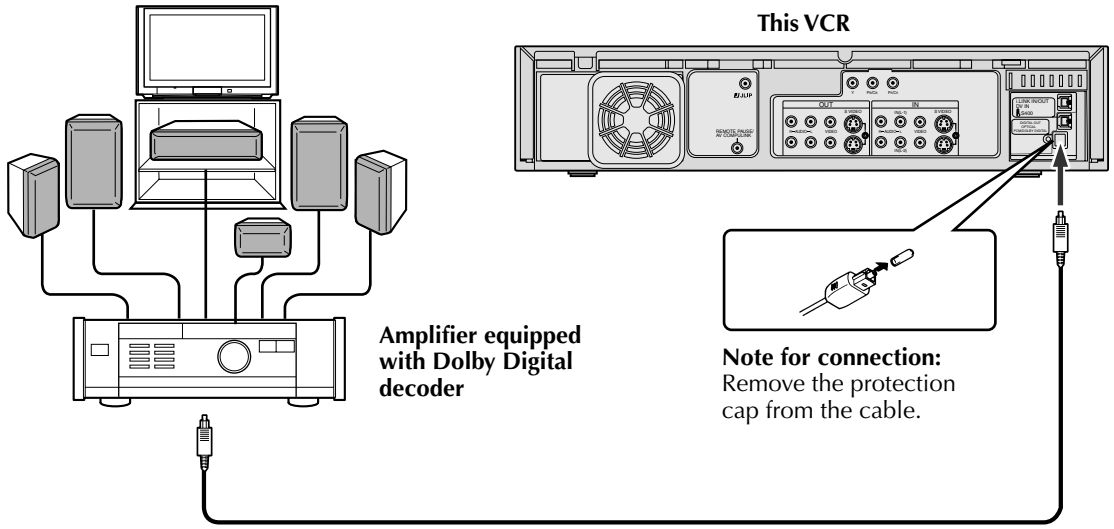
* The default setting is **bold** in the table below.

■ **"V. CALIBRATION" (S-VHS/VHS only)** **"ON"** "OFF"	When this function is set to "ON", this VCR checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures. This takes place whenever you play back a tape or start recording after inserting a tape. *NOTES:* ● *During playback, this function is always working even though "VIDEO CALIBRATION" appears just at the beginning of automatic tracking.* ● *During recording, this function works only for the first SP recording and the first EP recording on an inserted tape.* *For timer recording, this function checks the tape condition both for the SP recording and the EP recording before the first timer recording starts.* ● *When you play back rental tapes or tapes recorded on other VCRs, set this function either "ON" or "OFF" whichever gives you the best picture.*
■ **"PICTURE CONTROL" (S-VHS/VHS only)** **"AUTO"** ("NORM") "EDIT" "SOFT" "SHARP"	This function helps you to adjust the playback picture quality according to your preference. **"AUTO"** : Normally select this. Picture quality is adjusted automatically. ("NORM") When "V. CALIBRATION" is "OFF", "NORM" will appear instead of "AUTO". The quality is not adjusted automatically when "NORM" appears. "EDIT" : Minimizes picture degradation during editing (recording and playback). "SOFT" : Reduces image coarseness when viewing overplayed tapes containing much noise. "SHARP" : Clearer, sharper-edged picture when viewing images with much flat, same-colored surfaces such as cartoons. *NOTES:* ● *When you select "EDIT", "SOFT" or "SHARP", the selected mode will not change until you select again.* ● *Select "EDIT" when you are editing tapes (☞ page 20). After you finish editing the tapes, select "AUTO" ("NORM" when "V. CALIBRATION" is "OFF").*
■ **"DIGITAL R3" (S-VHS/VHS only)** **"ON"** "OFF"	When this function is set to "ON", edge correction to the luminance signal is performed to enhance details. Normally set this function to "ON". *NOTES:* ● *Depending on the type of tape being used, picture quality may be better with "DIGITAL R3" set to "OFF".* ● *If you use this VCR as the playback VCR for editing, be sure to set "DIGITAL R3" to "OFF" before starting.*
■ **"VIDEO STABILIZER" (S-VHS/VHS only)** "ON" **"OFF"**	When this function is set to "ON", you can correct vertical vibrations in the picture when playing back unstable recordings made on another VCR. This function is available only when playing back tapes recorded in EP mode. *NOTES:* ● *When you finish viewing a tape, be sure to set this function to "OFF".* ● *Regardless of the setting, this function has no effect during recording and during special effects playback.* ● *To watch recordings with close-caption, set this function to "OFF".* ● *When this function is set to "ON", the vertical vibrations may occur. Press [CHANNEL +] or [–] on the VCR (or [TV/VCR CH +] or [–] on the Remote) to eliminate vibration.*

Audio settings “AUDIO FUNCTION”

* The default setting is **bold** in the table below.

■ **“STD AUDIO REC MODE”** “STANDARD” **“PCM&STANDARD”**	You can select the audio format when you record a program or analog signal from connected devices in STD mode. When this function is set to “PCM&STANDARD”, you can obtain high-quality audio sound. “STANDARD” : Select this when the picture quality is important and when you record in MP2 format. **“PCM&STANDARD”** : Select this when the sound quality is important. When you record the analog signals or DV signals from the camcorder in STD mode, PCM audio is also recorded in addition to MP2 audio. In HS mode, PCM audio is automatically recorded.
■ **“DV AUDIO REC”** **“AUDIO1”** “AUDIO2” “1+2MIX”	Up to four audio signal channels can be input from a DV camcorder through the DV IN connector (i.LINK). This VCR allows you to select and record two of these channels. This setting is used to specify which two channels to record. **When there are four DV audio channels (32 kHz):** **“AUDIO1”**: Records the two channels (L/R) of DV AUDIO 1. “AUDIO2”: Records the two channels (L/R) of DV AUDIO 2. “1+2MIX” : Mixes and records both DV AUDIO 1 and 2. **When there are two DV audio channels (48 kHz):** Because there are only two channels, those two channels are recorded regardless of the DV sound setting.
■ **“OPTICAL OUT”** **“Dolby D”** “2CH-PCM” “STREAM”	This VCR can send the Dolby Digital bitstream or PCM Audio to external devices. When you play back a tape including the Dolby Digital bitstream, and if you have a device equipped with Dolby Digital decoder, set this function to “Dolby D”. If not, set this function to “2CH-PCM”. “STREAM” will be used when playing back and receiving a audio signals in other new formats.



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Input/Output settings "IN/OUT FUNCTION"

* The default setting is **bold** in the table below.

■ **"TV OUTPUT 1"** **"720to1080"** "NO CONV." "ALLto480i"	Select the appropriate mode when receiving signals via i.LINK connector or playing back a D-VHS tape containing a recording of an HD (High Definition) signal: **"720to1080"** : 720p is up-converted to 1080i and output to the TV. 1080i, 480p, and 480i image formats are output to the TV without being converted. Select this when the 720p image played back is distorted. "NO CONV." : 1080i, 720p, 480p, and 480i image formats are output to the TV just as they are. "ALLto480i" : All images will be output to the TV in 480i image format. *NOTE:* *When you receive signals via i.LINK connector or play back the picture of 1080i, 720p, 480p image format, the signal is not output from the S-VIDEO or VIDEO output connector if "TV OUTPUT 1" is set to "720to1080" or "NO CONV.".*
■ **"TV OUTPUT 2"** **"WIDE 16:9"** "NORMAL 4:3"	Select the appropriate mode depending on the type of TV you have. **"WIDE 16:9"** : Select this for a wide TV set with 16:9 screen image size. "NORMAL 4:3" : Select this for a TV set with 4:3 screen image size. *NOTES:* ● *When "TV OUTPUT 2" is set to "WIDE 16:9", sometimes the screen image may be stretched vertically.* ● *When "TV OUTPUT 2" is set to "NORMAL 4:3", sometimes subtitles may not be visible or the ends of the screen image may be cut off. Normally select "WIDE16:9".* ● *In order to let the equipment determine the screen image size, it is recommended that you connect the VCR and TV using the component video output connectors or [S VIDEO OUT] connector.*
■ **"FRONT AUX F-1"** **"VIDEO"** "S-VIDEO"	You have to select which terminal — either [VIDEO] (composite) or [S-VIDEO] (Y/C separate signals) to use as the video input terminal on the front panel. Make sure to select the correct terminal; otherwise, you may fail in recording (editing) on this VCR.
■ **"REAR AUX L-1"** **"VIDEO"** "S-VIDEO"	You have to select which terminal — either [VIDEO] (composite) or [S VIDEO] (Y/C separate signals) to use as the video input terminal [L-1] on the rear panel. Make sure to select the correct terminal; otherwise, you may fail in recording (editing) on this VCR.
■ **"REAR AUX L-2"** **"VIDEO"** "S-VIDEO"	You have to select which terminal — either [VIDEO] (composite) or [S VIDEO] (Y/C separate signals) to use as the video input terminal [L-2] on the rear panel. Make sure to select the correct terminal; otherwise, you may fail in recording (editing) on this VCR.

Additional settings "ADDITIONAL"

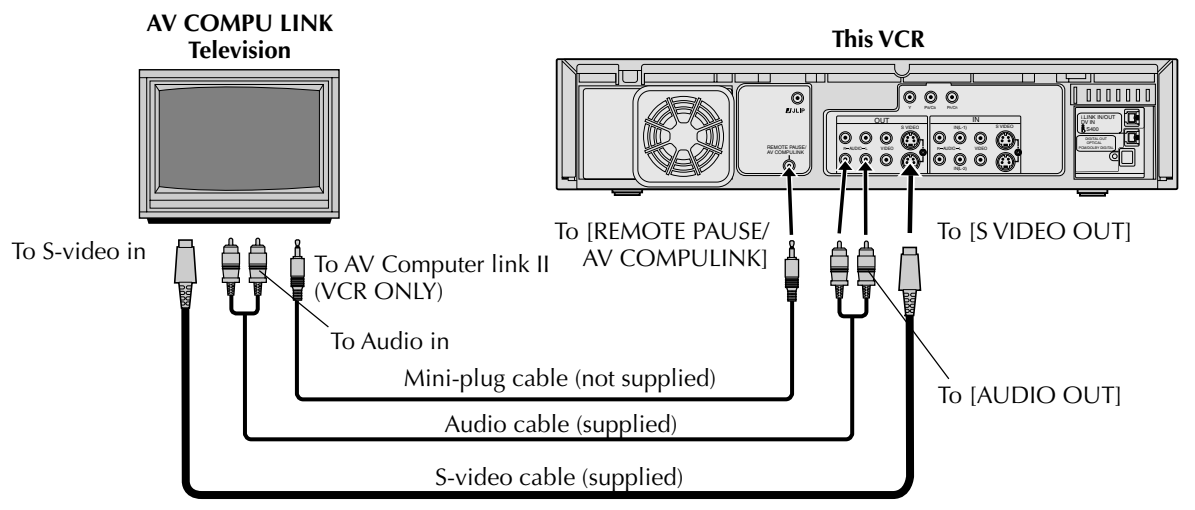
* The default setting is **bold** in the table below.

■ **"SUPERIMPOSE"** **"ON"** "OFF"	When this function is set to "ON", various VCR status information (on-screen display) appears on the screen. *NOTES:* ● *When you use this VCR as the playback VCR for editing a tape, be sure to set this function to "OFF"; otherwise, the VCR status information (on-screen display) will be recorded on the edited tape.* ● *If you select a channel on which no signal is received, the channel number is displayed regardless of this function setting.*
■ **"GRAY BACK"** **"ON"** "OFF"	When this function is set to "ON", the VCR changes the screen into the gray back screen automatically when receiving a channel not in use.
■ **"POWER SAVE"** "ON" **"OFF"**	When this function is set to "ON", you can reduce the power consumption. While the VCR is turned off, the front display panel does not show the clock. When this function is set to "ON", an i.LINK device cannot be recognized. As a result, it is not possible to record a program using the digital tuner's* timer function. In addition the device does not pass along data if it is in a branched connection. ** For details of a digital tuner, refer to the instruction manual of the digital tuner.* *NOTE:* *It takes some time until VCR completes its set up when you turn on the VCR.*

CONTINUED ON NEXT PAGE ➡

* The default setting is **bold** in the table below.

■ **"S-VHS MODE"** **"ON"** "OFF"	You can determine which recording mode — either S-VHS mode or VHS mode — is used for recording on D-VHS and S-VHS tapes. **When this function is set to "ON",** you can record on D-VHS and S-VHS tapes with S-VHS picture quality. **When this function is set to "OFF",** you can record on D-VHS and S-VHS tapes with VHS picture quality. *NOTES:* ● *To record in S-VHS/VHS mode on D-VHS tape, press D-VHS to turn off the [D-VHS] indicator.* ● *S-VHS mode allows you to make high quality video recordings with horizontal resolution of 400 lines, comparing with the 230 lines of resolution of conventional VHS recordings. To achieve the highest quality picture we recommend to record in S-VHS mode. (But remember that a conventional VHS VCR without SQPB cannot play back S-VHS tapes recorded in S-VHS mode.)* ● *S-VHS MODE setting does not affect recording on VHS tapes. Recording on VHS tapes is always performed in VHS mode except when using S-VHS ET mode (☞ page 41).*
■ **"AV COMPU-LINK"** **"ON"** "OFF"	The [REMOTE PAUSE/AV COMPULINK] terminal on the rear panel can be used as either the [REMOTE PAUSE] terminal or the [AV COMPULINK] terminal. **When this function is set to "ON",** you can use this terminal as the [AV COMPULINK] terminal. By connecting other JVC's [AV COMPULINK] components (see the diagram below), including amplifiers (or receivers) and televisions, one touch control of the audio and video components linked via their [AV COMPULINK] connectors becomes possible. For example: simply load a cassette in the VCR and press [PLAY (►)] so that the [AV COMPULINK] components automatically turn on, the TV's AV mode is selected and the VCR starts playback. (You do not have to press [PLAY (►)] if the cassette's record safety tab is removed.) **When this function is set to "OFF",** you can use this terminal as the [REMOTE PAUSE] terminal (☞ page 21). *NOTES:* ● *When the remote control code is set to "C" or "D", the connector cannot be used as [AV COMPULINK] terminal even if "AV COMPU-LINK" is set to "ON". It is recommended to set the remote control code to "A" when you use this function. (☞ page 46).* ● *Connection varies depending on the type of JVC TV you have. Refer to the TV's instruction manual when making this connection.*

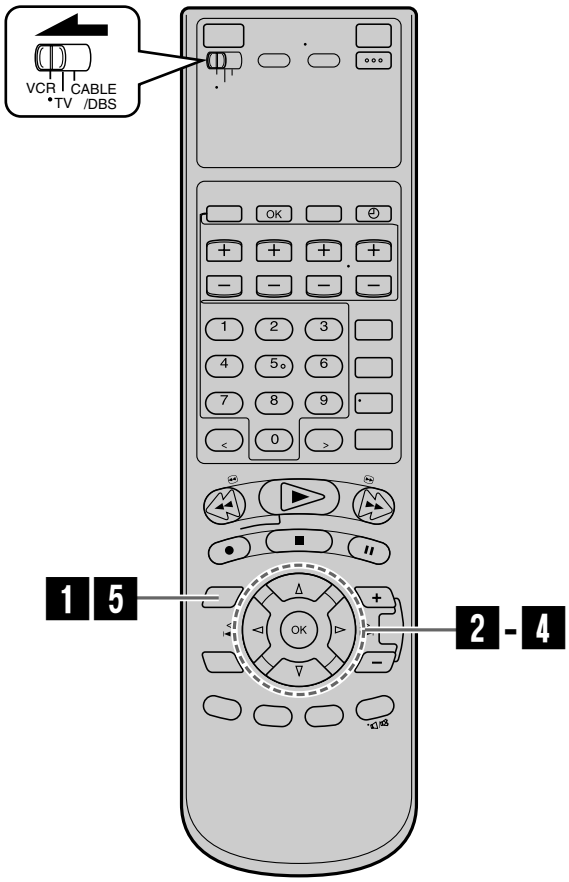


* The default setting is **bold** in the table below.

■ **“S-VHS ET”** “ON” **“OFF”**	This function allows you to record on VHS tapes with S-VHS picture quality. Tapes recorded using this function can be played back on a VCR equipped with the S-VHS ET function. The S-VHS indicator lights up on the front display panel when “S-VHS ET” is set to “ON”. *NOTES:* ● *Before recording, make sure that ”V. CALIBRATION” is set to “ON” (☞ page 36).* ● *You cannot activate the S-VHS ET function...* – *while recording is in progress.* – *while timer-recording or Instant Timer Recording (☞ page 22) is in progress.* – *while Video Calibration (☞ page 36) is in progress.* ● *S-VHS ET does not work with S-VHS tapes.* ● *To keep the highest quality recording and playback pictures over a long period of time, S-VHS recording on S-VHS tapes is recommended.* ● *Use of high grade tapes are recommended for S-VHS ET recordings.* *On some tapes, picture quality will not improve even if the S-VHS ET function is used. Check the recording quality before you start important recordings.* ● *You can play back S-VHS ET recordings on most of S-VHS VCRs and of VHS VCR equipped with SQPB (S-VHS QUASI PLAYBACK) function. (Notice some VCRs are not compatible with this function.)* ● *While playing back a tape recorded with this function on some tapes, noise may appear. (If playback picture becomes blurred or interrupted, use a cleaning cassette.)* ● *During special effect playback (☞ page 13), noise may appear. If special effect playback is performed frequently on a tape recorded with this function, the tape may be damaged and picture may be deteriorated.*
■ **“DISPLAY”** **“ON”** “OFF”	When this function is set to “OFF”, only “:” appears on the front display panel. *NOTE:* *Even if you set “DISPLAY” to “OFF”, each item appears on the front display panel in the following cases;* ● *when you press [REC (●)] twice for the ITR (☞ page 22).* ● *when you set the remote control code (☞ page 46).* ● *when you press [DISPLAY], the current status appears for a few seconds.*

i.LINK Set Up

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



ATTENTION
If the i.LINK setting does not work, press [D-VHS] and [STOP/EJECT (■/⏏)] on the front panel simultaneously for more than 5 seconds to reset the settings. The cassette is automatically ejected.

LINC
You can control one of the i.LINK-compatible devices connected to this VCR with the i.LINK cable. "LINC" means to select one of the connected devices. After establishing a LINC with an i.LINK-compatible device, you're ready to control the i.LINK device.
LINC (Logical Interface Connection) involves establishing a logical connection, as the abbreviation implies.

i.LINK set up for connected device

When you connect i.LINK compatible devices to this VCR, an i.LINK device number is assigned to each device in the order of connection.
If you want to change the number, follow the procedure below.

1 Access Main Menu screen

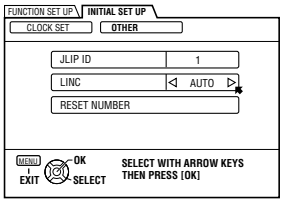
Press [MENU].

2 Access i.LINK Set Up screen

1 Press [◁ ▷] to move the arrow to "INITIAL SET UP", then press [▽] or [OK].
2 Press [◁ ▷] to move the arrow to "OTHER", then press [▽] or [OK].

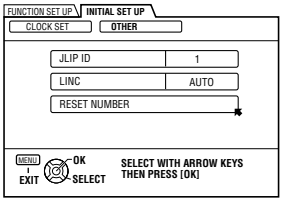
3 Confirm LINC setting

Check that "LINC" is set to "AUTO". If not, press [△▽] to move the arrow to "LINC", then press [◁ ▷] to set to "AUTO".



4 Reset Number

Press [△▽] to move the arrow to "RESET NUMBER", then press [OK].



5 Return to normal screen

Press [MENU].

6 Set Number again

Connect the external devices one by one.

- Make sure to connect the VCR's AC power plug to the AC outlet and turn on the external device before connection.
- Each device will be numbered in the order of connection.

NOTES:

- *If you do not want to set i.LINK device number, set "LINC" to "OFF" in step* **3**.
- *You cannot use the i.LINK connection depending on the type of NTSC camcorders equipped with the DV connector. In this case, set "LINC" to "OFF" in step* **3**.

What is i.LINK?

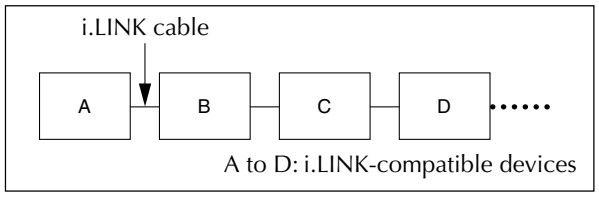
i.LINK is a digital serial interface that allows devices equipped with an i.LINK connector to exchange digital video signals, digital audio signals, and device control signals bi-directionally over a single cable.

i.Link refers to the IEEE1394-1995 industry specification and extensions thereof. The i logo is used for products compliant with the i.Link standard.

This VCR uses a four-pin i.LINK connector to input and output MPEG2 video signals, audio signals, and control signals. The i.LINK connector is also used as an input for DV compressed signals from the DV output of a digital video camera.

i.LINK Connection

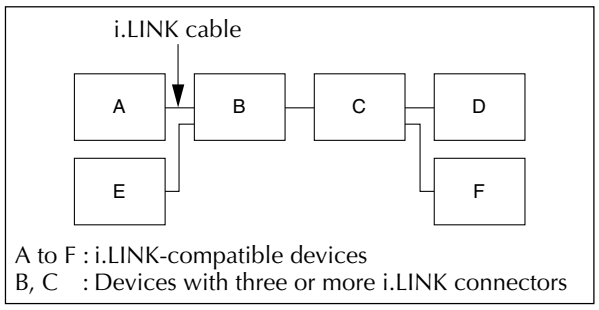
i.LINK-compatible devices can be connected in daisy chain fashion using i.LINK cables.



Any two devices in the daisy chain can exchange data bi-directionally, even if there are other devices connected between them.
i.LINK also supports a *repeater function* that passes input MPEG2 and DV signals through to the next device in the chain.

i.LINK Branched Connection

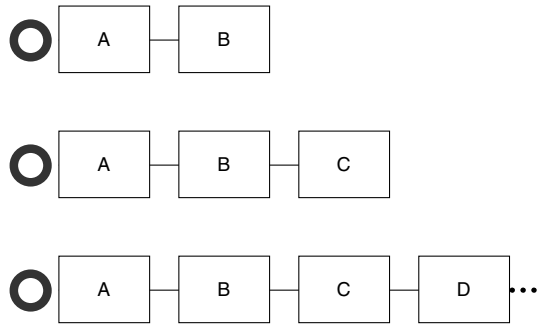
If you are connecting a device that is equipped with three or more i.LINK connectors, you can also branch the i.LINK connection.



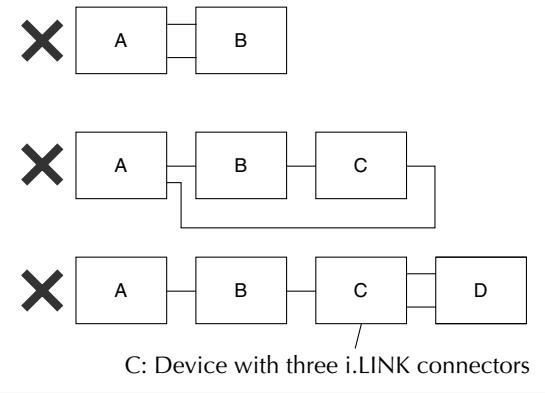
i.LINK Connection Examples

Examples of good i.LINK connections and bad i.LINK connections are shown below. The digital signals flow to all connected devices. When connecting i.LINK devices, make sure that the devices are connected in such a way that digital signals do not return (loop back) to the device that output them. Looped connection is not permitted.

Good connection examples
(A to D: i.LINK-compatible devices)
The connections below do not form a loop.



Bad connection examples
(A to D: i.LINK-compatible devices)
The connections below form a loop.

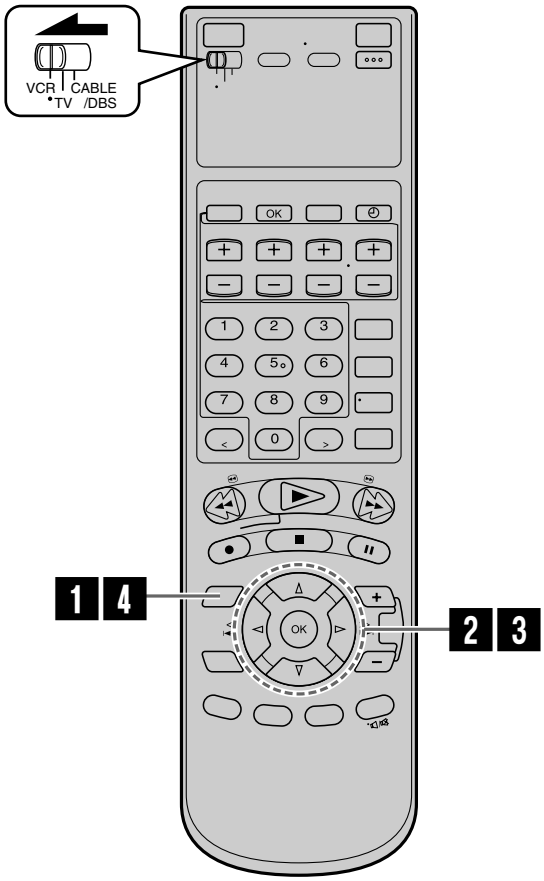


NOTES:

- *You can connect as many as 63 devices (including this VCR) through an i.LINK connection. If you use a branched i.LINK connection, however, the maximum path length on a branch is 17 devices.*
- *In the case of a personal computer and some other devices, data is not passed along by those devices if the device power is off. For details, refer to the instruction manual for the connected device.*
  Furthermore, data is not passed along by this VCR when "POWER SAVE" is set to "ON" on this VCR (☞ page 39) and the VCR is turned off.
- *The maximum data transfer speed supported by the i.LINK connector on this VCR is 400 Mbps (approximately 400 megabits per second). The maximum data transfer speed that is actually attained may be slower depending on how this VCR is used or if a device with a slower transfer speed is connected to this VCR.*
- *Use the commercially available i.LINK cable (4-pin, S400, below 3 m).*
  If the cable used is above 3 m, the operation of this VCR is not guaranteed.

JLIP ID Number Setting

- Turn on the VCR and the TV, and select the AV mode on the TV.
- Set the [VCR/TV/CABLE/DBS] selector on the Remote to [VCR].



The JLIP (Joint Level Interface Protocol) terminal is used to connect the VCR to a personal computer or similar device. By connecting through the JLIP terminals, you can control the VCR during editing and certain other operations, from the connected personal computer or similar device.

When connecting this VCR to another device using the JLIP terminals, each device must have a different JLIP ID number.

The JLIP ID number of this VCR is preset to "1" when shipped from the factory. You can change this number to any other number between 1 to 99.

To change the JLIP ID number of this VCR, follow the procedure below.

1 Access Main Menu screen

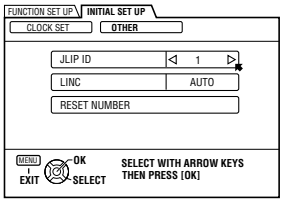
Press [MENU].

2 Select JLIP ID Set Up screen

1 Press [◁ ▷] to move the arrow to "INITIAL SET UP", then press [▽] or [OK].
2 Press [◁ ▷] to move the arrow to "OTHER", then press [▽] or [OK].

3 Set JLIP ID Number

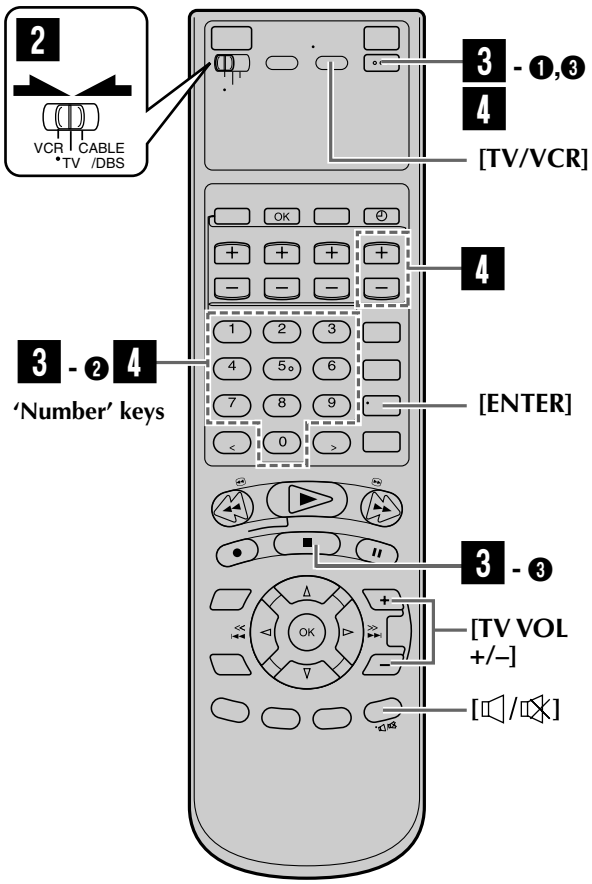
Press [△▽] to move the arrow to "JLIP ID".
Press [◁ ▷] to enter the desired ID number.



4 Return to normal screen

Press [MENU].

TV Brand Setting



When programmed (set) with a manufacturer's (brand's) code, this Remote can perform some of the remote control functions of the listed TVs. You can control a JVC TV without setting a brand code.

1 Turn on the TV

Turn on the TV using the [POWER] button on the TV or its Remote.

2 Set remote operation mode

Set the [VCR/TV/CABLE/DBS] selector to [TV].

3 Set TV brand code

Follow the example shown below.

❶ Press and hold [POWER].
❷ Press the 'Number' keys to enter your TV's brand code by referring to the table below.
❸ Press [STOP (■)], and release [POWER].

- Once you have set the Remote to operate the TV, you do not have to set it until you replace the batteries from the Remote.
- JVC and PANASONIC have two codes. If the TV does not function with one code, try entering the other.

4 Operate TV

Press one of the following buttons: [POWER], [TV/VCR], [TV/VCR CH +/–], [🔊/🔇] (TV Muting), [TV VOL +/–], and 'Number' keys.

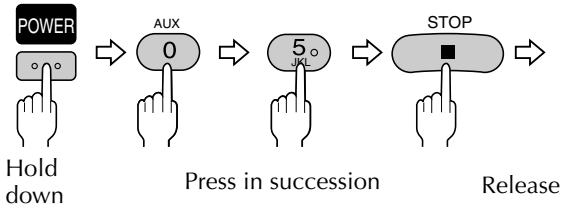
- For some brands, you must press [ENTER] after having pressed the 'Number' keys to enter a channel number.
- To operate the VCR, set the [VCR/TV/CABLE/DBS] selector back to [VCR].

NOTES:

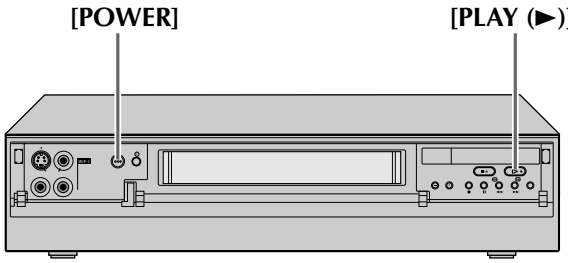
- *Depending on the type of TV, some or all functions cannot be operated using this Remote.*
- *It's impossible to control a TV that does not have a remote sensor.*

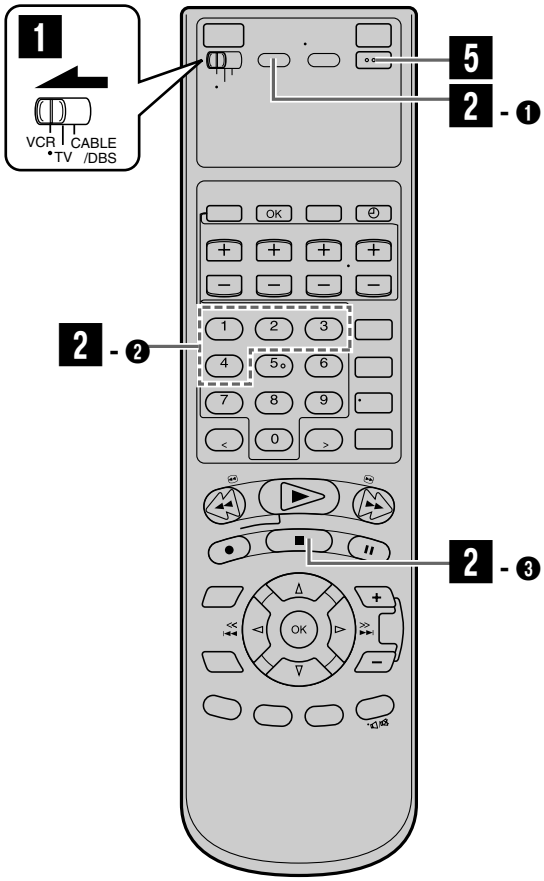
TV BRAND NAME	BRAND CODE
JVC	01, 03
HITACHI	10
MAGNAVOX	02
MITSUBISHI	03
PANASONIC	04, 11
RCA	05
SHARP	06
SONY	07
SAMSUNG	12
SANYO	13
SEARS	13
TOSHIBA	08
ZENITH	09

(Ex.) To set Remote to RCA 05:



Changing Remote Control Code





NOTE:

When "POWER SAVE" is set to "ON", you can not change the remote control code. Before changing the code, set "POWER SAVE" to "OFF" (☞ page 39).

The Remote is capable of controlling four JVC video recorders independently. Each of VCRs can respond to one of four codes (A, B, C or D).

This Remote control is preset to send A code signals because your VCR is initially set to respond to A code signals. You can easily change your Remote and the VCR to send and respond to B, C or D code signals.

When using four JVC VCRs, set the four VCRs and their Remotes to different codes, so that the Remotes can operate these VCRs separately.

1 Set remote operation mode

Set the [VCR/TV/CABLE/DBS] selector to [VCR].

2 Set remote control code for Remote

❶ Press and hold [A/B/C/D].

❷ Press the 'Number' key [1] for A code control signals, [2] for B code control signals, [3] for C code control signals and [4] for D code control signals.

❸ Press [STOP (■)], and release [A/B/C/D].

3 Turn off VCR

Press [POWER] on the VCR.

4 Check remote control code for VCR

Press [PLAY (►)] on the VCR for more than 5 seconds.

- The code currently set appears on the front display panel.

5 Turn on VCR

Press [POWER] on the Remote.

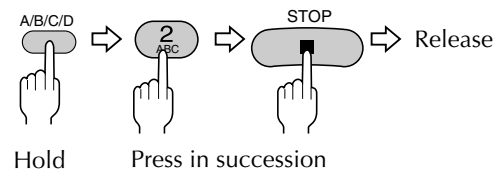
- The code transmitted from the Remote blinks for a few seconds on the front display panel.
- After the code disappears on the front display panel, make sure that the VCR is turned on by pressing [POWER] on the Remote.

To control four VCRs with the same Remote

You can control four JVC VCRs by switching the remote control code for the Remote between A, B, C and D (☞ step 2), keeping four VCRs to different control codes.

- Press the 'Number' key [1] for A code control signals, [2] for B code control signals, [3] for C code control signals and [4] for D code control signals. (To change only the remote control code for the Remote, DO NOT perform steps 3 to 5.)

(Ex.) To set Remote to B code:



Troubleshooting

Before requesting service, use this chart and see if you can repair the trouble yourself. Small problems are often easily corrected, and this can save you the trouble of sending your VCR off for repair.

POWER

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The power will not come on.	● The AC power cord is disconnected.	Connect the AC power cord.
2. The Remote will not function.	● The batteries are weak.	Replace the dead batteries with new ones.

TAPE TRANSPORT

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The cassette gets stuck partway during loading, and is ejected.	● The cassette was inserted incorrectly.	Make sure the cassette's window is facing up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR. Then insert the cassette.

PLAYBACK

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The tape is running but the picture will not appear.	● The TV receiver is set to the wrong mode.	Select the AV mode on the TV.
2. Breaks are noticeable in Hi-Fi sound track.	● Automatic tracking is engaged.	Disengage auto tracking and adjust the tracking manually (☞ page 10).
3. The playback picture is blurred or interrupted, even though TV broadcasts are clear.	● The video heads may be dirty.	The heads must be cleaned. Use an optional dry cleaning cassette, or consult your JVC dealer.
4. The picture stops, or the black or mosaic noise appears when playing back a program recorded in D-VHS mode.	● The video heads may be dirty. ● The digital program is not recorded in D-VHS mode.	The heads must be cleaned. Use an optional dry cleaning cassette, or consult your JVC dealer. To record in the D-VHS mode, use a D-VHS cassette.
5. The Hi-Fi sound cannot be heard.	● Audio Monitor setting is incorrect.	Set Audio Monitor to "▷ L R ◁" (☞ page 10).
6. The [D-VHS] indicator does not light up when playing back a D-VHS cassette.	● The program is not recorded in D-VHS mode.	To record the program in D-VHS mode, press [D-VHS] so that the [D-VHS] indicator lights up, then perform the recording (☞ page 18).
7. The mosaic noise appears when receiving the scenes with fast action or switching the display.	● This occurs when receiving the program with the low transfer rate.	This noise already appears in the broadcast station, and this is not a malfunction of your VCR.

CONTINUED ON NEXT PAGE ➡

EDITNG

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Recording will not start, and [CASS] blinks on the front display panel for about 5 seconds.	● There is no cassette loaded. ● The loaded cassette has had its record safety tab removed.	Insert a cassette. Remove the cassette and cover the hole with adhesive tape, or load a cassette on which the record safety tab is intact.
2. Tape-to-tape editing will not work.	● The components have been incorrectly connected, or correct video connector ([S VIDEO] or [VIDEO]) is not selected. ● The power to one or more of the units has not been turned on. ● The recording VCR's input location has been set incorrectly.	Connect the components correctly (☞ page 5, 6) or check "REAR AUX L-1 (or L-2)" and "FRONT AUX F-1" setting (☞ page 38). Make sure the power to all units is on. Select the appropriate input location on the recording VCR.

VIDEO NAVIGATION

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. Tape information screen does not appear for the currently inserted tape.	● The current tape inserted has not been recorded on this VCR.	Tape information cannot be shown if it has not been recorded on this VCR.
2. The VCR cannot search for the desired program.	● Two (or more) tape numbers are recorded on one tape. ● The inserted program is not recorded on this VCR.	Video Navigation cannot work correctly on a tape if it has more than one tape number. If this happens, fast-forward the tape up to its end, eject it, and try it again. It is impossible to search the desired program which is not recorded on this VCR using Video Navigation.
3. "MEMORY FULL" appears on the screen when you try to start recording.	● The VCR's memory for Video Navigation is fully recorded.	Check the remaining memory (☞ page 34). If it is full, delete unnecessary Video Navigation information (☞ page 33, 34).
4. The information data for Video Navigation is not registered.	● The VCR's memory for Video Navigation is fully recorded. ● "NAVIGATION" is set to "OFF". ● The recording time is not enough.	Check the remaining memory (☞ page 34). If it is full, delete unnecessary Video Navigation information (☞ page 33, 34). Set "NAVIGATION" to "ON" (☞ page 25). For details on the recording time for Video Navigation, refer to 'NOTES' on page 24.

OTHER PROBLEMS

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
1. The auxiliary input cannot be changed.	● Recording is in progress.	Press [PAUSE (❚❚)] to pause the recording, change auxiliary inputs, then press [PLAY (►)] to resume recording.
2. The Remote will not operate your TV.	● The brand codes are set incorrectly.	Reset the correct brand codes (☞ page 45).
3. "PM" blinks on the front display panel.	● The VCR do not work properly.	Unplug the AC power plug once, then plug it again.
4. The subtitles and the menu screen are overlapped.	● The subtitle display on the TV is set to on.	Set it to off.

MOISTURE CONDENSATION

Moisture in the air will condense on the VCR when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the VCR turned on for a few hours to evaporate the moisture before inserting a tape.

ABOUT HEAD CLEANING

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Be sure to contact your nearest JVC dealer if such troubles occur.

ATTENTION

This VCR contains microcomputers. External electronic noise or interference can cause microcomputer to malfunction. If the VCR does not operate correctly switch its power off and unplug the AC power cord from the AC supply. Wait for a while and then plug the power back in. Eject and check the condition of the cassette. If everything appears normal, you can operate the VCR as usual.

The following conditions are product features and do not indicate mechanical problems.

Playback of tapes recorded in D-VHS mode
- You may see a mosaic (block) noise, grayed images, or a still image in cases of excessive distortion caused when playing back a damaged tape or when the heads are momentarily dirty.
- After you press [PLAY (►)], it takes a moment until you see the image and hear the sound.
- After you switch playback speeds (when switching from special effect playback to normal playback, for example), it takes a moment until you see the image and hear the sound. For a few seconds, the image may be played back out of sync with the sound.

Searching images on D-VHS tapes
- The images appear frame by frame.
- Block noise may appear on the bottom half of images.
- When the blank portion is reached, a still scene of the last recorded image is displayed.

The picture stops/There is no sound
- When two or more devices are connected to this VCR with the i.LINK cable (a camcorder and another i.LINK-compatible device), do not turn on the camcorder if you record a program from an another i.Link-compatible device. Turning on and off the camcorder may cause momentary still images and loss of sound.

Image or sound is distorted
- When recording from a camcorder connected to this VCR with the i.LINK cable, the image or sound may be distorted. If this occurs, insert a D-VHS cassette in the VCR and turn off and on the VCR, then start recording again. If the problem is not fixed, record using the audio/video input connectors instead of i.LINK connector.

Recording from camcorders and other devices via i.LINK connector
- You may see a mosaic (block) noise.
- For scenes with fast action, the image may jitter. This does not affect recording, which will proceed as usual.
- When you watch the camcorder's search images through this VCR, the block noise may appear.
- When you record audio-dubbed DVC cassettes (tapes which have four recorded channels), sound may not be heard for the first few seconds.
- When you eject and insert D-VHS cassettes, the sound may be interrupted for an instant.
- When you press [REC SPEED]/[SPEED] to switch recording speed, the sound may be interrupted for an instant.

Incorrect image formatting for wide TVs
- If you have connected two different devices using the S-video output connectors on the back of the VCR, the sensing signal for wide TVs may not be output correctly depending on the connected devices. If this occurs, use the TV controls to switch the screen size.

Error Codes and Messages

Some error codes and messages may appear on the TV screen when operating the VCR. Refer to the chart below for the solution.

CODE	MESSAGE	DESCRIPTION
102	"REC PROHIBITED"	● An attempt was made to make a D-VHS recording of a program for which only the analog information is copy protected. ● While making a D-VHS recording of a program, a signal in which only the analog information is copy protected was input to this VCR.
103	"REC PROHIBITED"	● An attempt was made to dub a D-VHS recording of a digitally copy protected program. ● While dubbing a D-VHS recording, digitally copy protected information was input to this VCR. ● This VCR supports copy protection technologies such as DTLA, and cannot record programs that employ digital copy protection.
105	"CAN NOT REC DIGITAL INPUT BY S-VHS/VHS" "CHOOSE ANALOG INPUT"	● An attempt was made to make an S-VHS/VHS recording of a signal from an i.LINK device. ● The i.LINK connector on this VCR is intended only for D-VHS recording. This VCR does not convert a digital signal into an analog signal for recording. Switch to the analog input for recording.
108	"REC BY HS MODE"	● When 720p, 1080i signals are recorded in STD/LS3/LS5 mode, select HS mode to record program properly.
201	"WAIT A MINUTE CALIBRATING. . ."	● Normal playback is being prevented by mosaic noise, etc. ● Wait while the VCR calibrates itself so that it can output a normal image.
202	"COPY RESTRICTED PROG OUTPUT 480i VIDEO"	● When playing back a program that was copy protected in 1080i, 720p, or 480p mode, the VCR down-converts to 480i mode for output.
203	"COPY RESTRICTED PROG CAN NOT PLAY BACK"	● An attempt was made to play back a tape containing a copy protected program. ● Even if you record a copy protected program, this VCR cannot play it back.
205	"CAN NOT PLAY BACK THIS TAPE"	● An attempt was made to play back a tape containing an invalid D-VHS recording.
301	"TOO MANY i.LINK INSTRUMENTS READ INST.BOOK"	● A signal containing too much data was input to the i.LINK connector on this VCR. ● There are too many devices with i.LINK connectors, such as VCRs and digital video cameras, connected to the i.LINK connector on this VCR. Turn off any devices that are not in use.
302	"COPY RESTRICTED PROG OUTPUT 480i VIDEO"	● When playing back a program that was copy protected in 1080i, 720p, or 480p mode, the VCR down-converts to 480i mode for output.

Questions and answers

PLAYBACK

Q. What happens if the tape reaches its end during playback or search?

A. The VCR automatically rewinds it to the beginning.

Q. Can the VCR indefinitely remain in still mode?

A. No. It stops automatically after 5 minutes to protect the heads.

Q. During picture search, still picture playback and frame-by-frame playback, the picture is intermittent. What's the cause?

A. Picture loss occurs when these types of playback are attempted with a tape recorded in LP mode. Pressing [PLAY (►)] to return to normal playback will restore the picture.

Q. When returning from variable-speed picture search to normal playback, the picture is disturbed. Should I be concerned about this?

A. No, it is normal.

Q. Other than preventing further recording, what effect does removing the safety tab have?

A. It disables marking of index codes and tape numbers for Video Navigation.

Q. Sometimes, during index search, the VCR cannot find the program I want to see. Why not?

A. There may be index codes too close together.

Q. During playback, on-screen display sometimes jitters. Why does this happen?

A. If the condition of the tape being played back is not good, jittering of the video (including on-screen display) may occur.

RECORDING

Q. When I pause and then resume a recording, the end of the recording before the pause is overlapped by the new recording. Why does this happen?

A. This is normal. It reduces distortion at the pause and resume points.

Q. Can the VCR indefinitely remain in the recording pause mode?

A. No. The VCR automatically stops after 5 minutes to protect the heads. When paused during Instant Timer Recording (ITR), the VCR shuts off automatically after 5 minutes.

Q. What happens if the tape reaches its end during recording?

A. The VCR stops, then [○] and [▷] blink on the front display panel.

Index

Glossary

D-VHS
By utilizing the characteristic of the tape media, video and audio data compressed using MPEG2 method can be recorded at high-speed rate and in high volume.
Bit stream recording[*1] method is employed to record inputted MPEG2-TS signals (signals with additional information such as program assignment for service access other than MPEG2 video and audio data) directly.
This unit is equipped with **MPEG2 encoder/decoder**[*2] that enables digital recording and playback for analog signal (this unit supports only NTSC signal).
In addition, a vast amount of VHS analog recording images can be playbacked. This is D-VHS.
This unit has the feature to record and playback S-VHS and S-VHS ET as well.

[*1] Bit Stream Recording
Bit stream recording is a method to record the MPEG-TS signals compressed by MPEG2 on the tape directly and output the same type of signals.
This unit enables recording and playback of high definition MPEG2-TS signals at a high speed HS mode of 28.2 Mbps.

[*2] MPEG2 Decoder
This unit is also equipped with MPEG2 decoder to decode the MPEG-TS signals and output analog Y/Pb/Pr during playback.
When decoding MPEG-TS signals recorded at 720/30P, the signal will be converted to 720/60P that is generally used.

Linear PCM Audio
Conventional D-VHS recording uses MPEG-1 Layer 2 compression to record analog audio digitally.
For recording without compression, this VCR also features PCM recording (pulse code modulation: 48 kHz, 16-bit, 1536 kbps).
Used with high-resolution HS/STD mode, it offers outstanding high-fidelity recording and playback.
(Recording from audio input alone is not supported.)

Dolby Digital
A form of digital audio coding developed by Dolby Laboratories to deliver surround sound with 5.1 channels (front left and right, center, rear left and right, and a channel for LFE (low-frequency effects).
When you play back a digital tape encoded in Dolby Digital format, the Dolby Digital bistream is sent from the DIGITAL OUT OPTICAL connector.
Set “OPTICAL OUT” to “Dolby D” (☞ page 37).

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i.LINK
i.LINK is a digital serial interface that allows devices equipped with an i.LINK connector to exchange digital video signals, digital audio signals, and device control signals bi-directionally over a single cable.

i.Link refers to the IEEE1394-1995 industry specification and extensions thereof. The i logo is used for products compliant with the i.Link standard.

MPEG2
Abbreviation for Moving Picture Experts Group, Phase 2. Unlike previous compression methods, MPEG-2 uses an extremely efficient compression method that supports high-definition video. Based on the principle that much video data remains unchanged from one frame to the next, predictive coding is performed to eliminate redundant data.
Specifically, compression is applied between frames (based on the correlation of frame data) and within frames (based on DCT, or discrete cosine transform) for an extremely efficient compression technique.

List of terms

This guide serves as a quick way to locate frequently used terms and on-screen display names.

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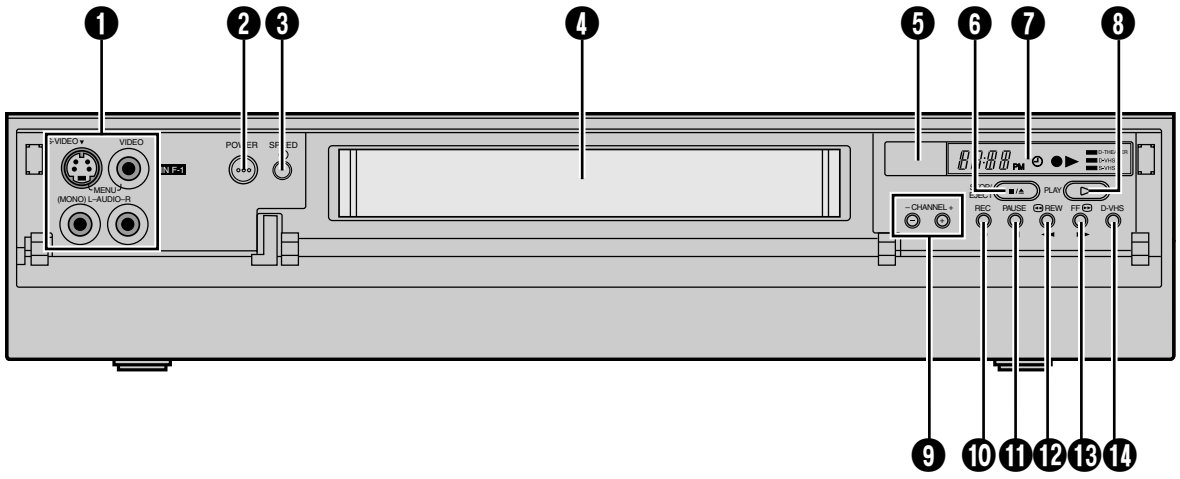
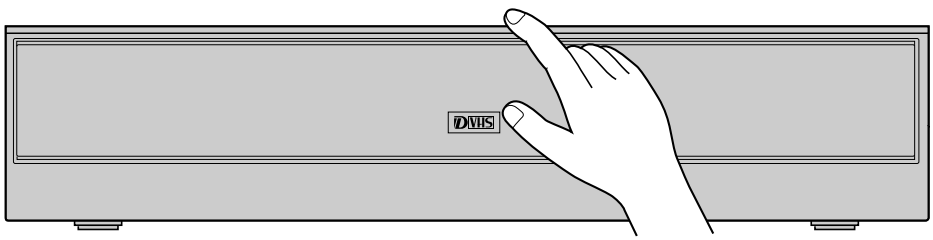
Front panel

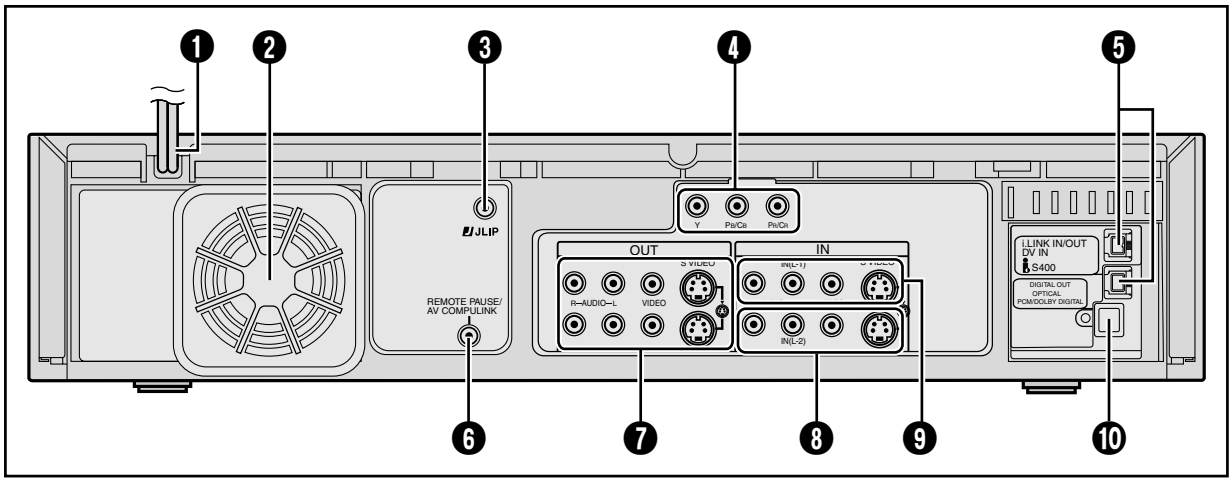


❶ [S-VIDEO/VIDEO/AUDIO] input connectors [IN F-1] : ☞ page 6
❷ [POWER] button : ☞ page 8, 20
❸ [SPEED] button : ☞ page 19
❹ Cassette loading slot
❺ Remote sensor
❻ [STOP/EJECT (■/⏏)] button : ☞ page 8, 20
❼ Front display panel : ☞ page 56
❽ [PLAY (►)] button : ☞ page 8
❾ [CHANNEL +] and [–] buttons : ☞ page 10, 18, 20
❿ [REC (●)] button : ☞ page 19, 20
⓫ [PAUSE (❚❚)] button : ☞ page 20
⓬ [REW (◄◄)] button : ☞ page 8, 13
⓭ [FF (►►)] button : ☞ page 8, 13
⓮ [D-VHS] button : ☞ page 21



To access covered buttons/connectors, pull and open the cover.

Rear panel

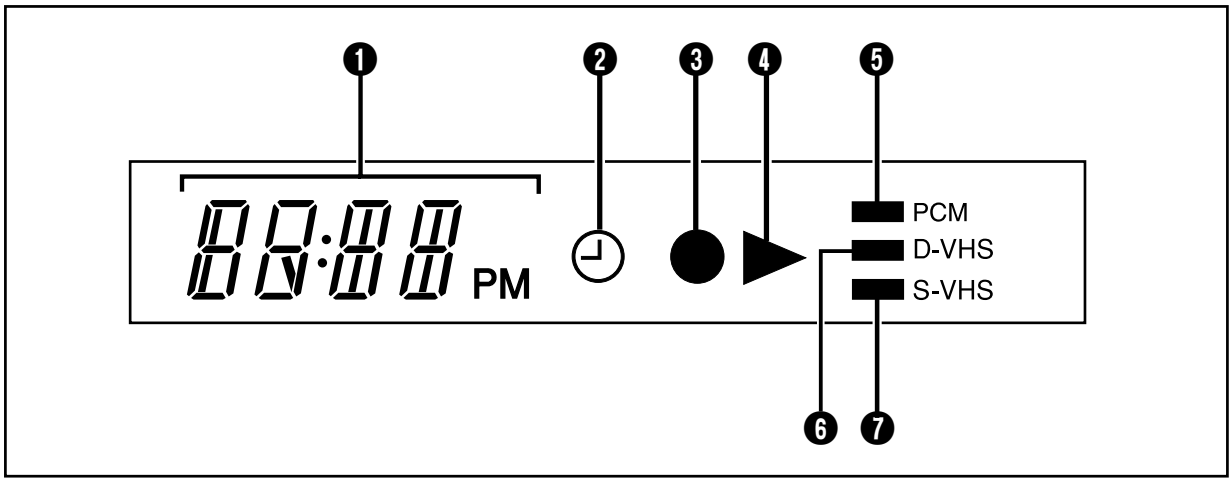


❶ AC power cord : ☞ page 5
❷ Cooling fan
- This prevents the temperature from rising inside the VCR. Do not remove it.
- Install the VCR so as not to block the area around the cooling fan.

❸ [JLIP] terminal : ☞ page 44
❹ Component video output connectors : ☞ page 5
❺ [i.LINK IN/OUT], [DV IN] Connector (i.Link*) : ☞ page 5
** i.Link refers to the IEEE1394-1995 industry specification and extensions thereof. The i logo is used for products compliant with the i.Link standard.*
❻ [REMOTE PAUSE/AV COMPULINK] terminal
- [REMOTE PAUSE] terminal : ☞ page 40
- [AV COMPULINK] terminal : ☞ page 40

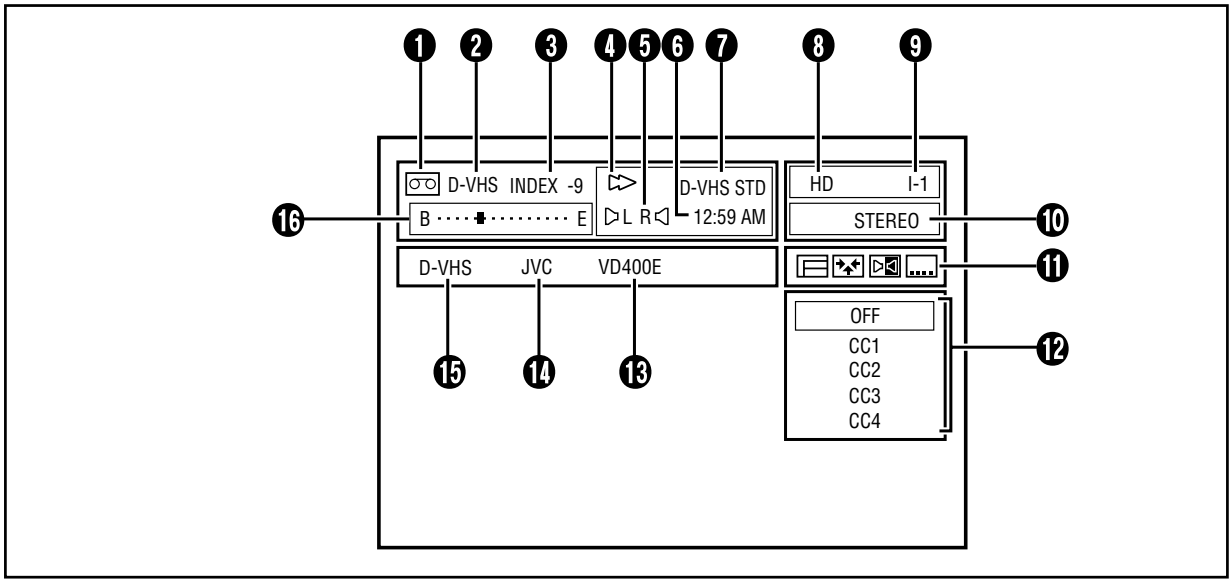
❼ [S VIDEO]/[AUDIO]/[VIDEO OUT] connectors : ☞ page 5, 6
❽ [S VIDEO]/[AUDIO]/[VIDEO IN] connectors [L-2]: ☞ page 6
❾ [S VIDEO]/[AUDIO]/[VIDEO IN] connectors [L-1]: ☞ page 6
❿ [DIGITAL OUT OPTICAL] terminal : ☞ page 37

Front display panel



❶ Auxiliary input ([L-1], [L-2], [F-1] and [I-1] etc.) Clock time : ☞ page 22
❷ Timer mode indicator : ☞ page 23
❸ Record mode indicator : ☞ page 22, 23
❹ Play mode indicator : ☞ page 9
❺ [PCM] indicator
❻ [D-VHS] indicator : ☞ page 18, 21
❼ [S-VHS] indicator : ☞ page 40, 41

On-screen display



❶ Cassette indication
❷ Cassette type indication : ☞ page 18
❸ Index no. indication : ☞ page 11
❹ VCR operation mode indication
❺ Audio monitor indications : ☞ page 10
❻ Clock time
Time counter*
Tape remaining time (When "REMAIN" appears)**

* *To reset the time counter, press [C. RESET] on the Remote. The counter reading becomes "0:00:00". It is also reset when a tape is inserted.*

** *The tape remaining time is calculated based on the recording speed being used. The indicated remaining time is only an estimate.*

❼ Recording mode indication : ☞ page 19, 21
Recording speed indication
❽ Image format ("HD"/"SD")
❾ Auxiliary input ("L-1", "L-2", "F-1" and "I-1" etc.)
❿ Audio Indications

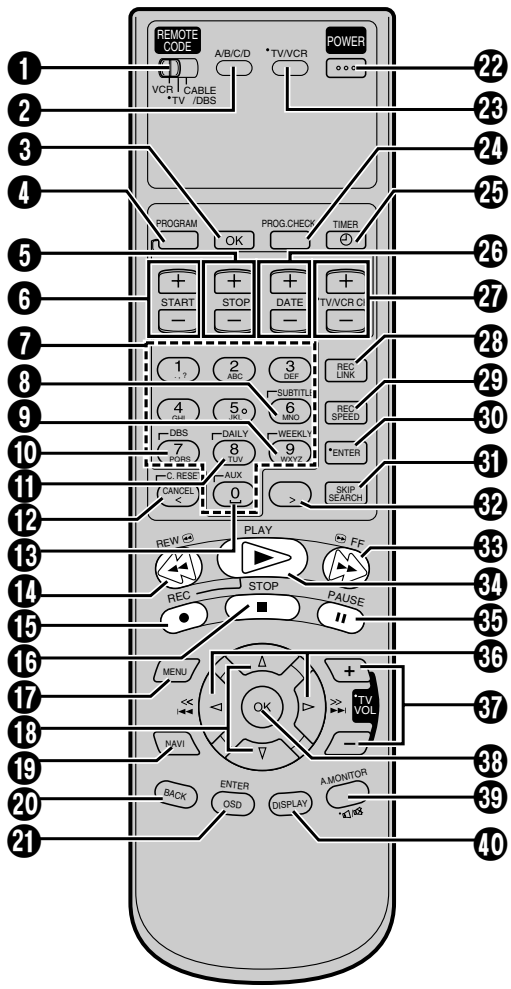
"STEREO"	When receiving the stereo broadcast
"Dolby D"	When playing back and receiving a Dolby Digital signals
"STREAM"	When playing back and receiving a audio signals in other new formats
"PCM"	When playing back and receiving a PCM audio signals
"AUDIO 1" "AUDIO 2" "1+2 MIX"	Depends on the "DV AUDIO REC" setting (☞ page 37)

⓫ Icons : ☞ page 12
: appears when a D-VHS cassette contains the multiple programs
: appears when a D-VHS cassette contains the multiple angle
: appears when a D-VHS cassette contains the audio in multiple language
: appears when a D-VHS cassette contains the subtitle in multiple language

NOTE:
The subtitles does not appear while the on-screen display is displayed.

⓬ Selections of the selected icon (⓫)
⓭ Model name of the device connected to the i.LINK connector
⓮ Brand name of the device connected to the i.LINK connector
⓯ Type of device connected to the i.LINK connector
⓰ Tape position indicator : ☞ page 9

Remote



How to use the Remote

Before use, insert two AA size batteries into the Remote with the polarity (⊕ and ⊖) matched correctly as indicated on the battery compartment or on the lid.

The Remote can operate most of your VCR's functions, as well as basic functions of TV sets.

- Point the Remote toward the remote sensor on the target component.
- The maximum operating distance of the remote control is about 8 m.

NOTES:

- *If the Remote does not work properly, remove its batteries, wait for a few seconds, replace the batteries and then try again.*
- *If the batteries of the Remote are weak, the Remote will not be able to control the TV. Replace the batteries.*

❶ [VCR/TV/CABLE/DBS] selector : ☞ page 45, 46
❷ [A/B/C/D] button : ☞ page 46
❸ [OK] Button
❹ No function
❺ No function
❻ No function
❼ Number keys : ☞ page 30, 32, 45
Character input buttons : ☞ page 32
❽ [SUBTITLE] button : ☞ page 12
❾ No function
❿ No function
⓫ No function
⓬ [CANCEL] button : ☞ page 17
[C. (Counter) RESET] button : ☞ page 57
[<] button : ☞ page 30
⓭ [AUX] button : ☞ page 45
⓮ [REW (◄◄ ⏪)] button : ☞ page 8, 13
⓯ [REC (●)] button : ☞ page 19, 20
⓰ [STOP (■)] button : ☞ page 8, 20
⓱ [MENU] button: ☞ page 7
⓲ [△▽] buttons: ☞ page 7
⓳ [NAVI] button : ☞ page 24
⓴ [BACK] button : ☞ page 35
㉑ [OSD] button : ☞ page 22
[ENTER] button : ☞ page 45
㉒ [POWER] button : ☞ page 8, 20
㉓ [TV/VCR] button : ☞ page 45
㉔ No function
㉕ No function
㉖ No function
㉗ [TV/VCR CH +/–] buttons : ☞ page 10, 14, 45
㉘ [REC LINK] button : ☞ page 23
㉙ [REC SPEED] button : ☞ page 19, 20
㉚ [ENTER] button
㉛ [SKIP SEARCH] button : ☞ page 11
㉜ [>] button : ☞ page 32
㉝ [FF (⏩ ►►)] button : ☞ page 8, 13
㉞ [PLAY (►)] button: ☞ page 8
㉟ [PAUSE (❚❚)] button : ☞ page 14, 20
㊱ [|◄◄ ►►| (◁ ▷)] buttons : ☞ page 11
㊲ [TV VOL +/–] button : ☞ page 45
㊳ [OK] Button
㊴ [A. (Audio) MONITOR] button : ☞ page 10
[🔊/🔇] (TV Muting) button : ☞ page 45
㊵ [DISPLAY] button : ☞ page 22

The glow-in-the-dark buttons shown in white on the illustration on the left column are helpful when using the Remote in darkened rooms.

Buttons with a small dot on the left side of the name can also be used to operate your TV after setting the [VCR/TV/CABLE/DBS] selector to [TV]. (☞ page 45).

GENERAL

Power requirement	: AC 220 V-240 V ∿, 50/60 Hz
Power consumption	
Power on	: 40 W
Power off	: 20 W
Temperature	
Operating	: 5°C to 40°C (41°F to 104°F)
Storage	: –20°C to 60°C (–4°F to 140°F)
Operating position	: Horizontal only
Dimensions (W x H x D)	: 435 mm x 94 mm x 383 mm (17-3/16" x 3-3/4" x 15-1/8")
Weight	: 5.5 kg (12.2 lbs)
Maximum recording time	
D-VHS (HS)	: 210 min. with DF-420 video cassette
D-VHS (STD)	: 420 min. with DF-420 video cassette
D-VHS (LS3)	: 1260 min. with DF-420 video cassette
D-VHS (LS5)	: 2100 min. with DF-420 video cassette
S-VHS/VHS (SP)	: 210 min. with ST-210 video cassette
S-VHS/VHS (EP)	: 630 min. with ST-210 video cassette

VIDEO/AUDIO (D-VHS)

Video format	: MPEG2 standard
Audio format	: Encode MPEG1 Layer2 Decode MPEG1 Layer2/ Dolby Digital / LINEAR PCM (HS/STD)
Track composition	
Tape speed	: 33.4 mm/sec (HS mode) 16.67 mm/sec (STD mode) 5.55 mm/sec (LS3 mode) 3.33 mm/sec (LS5 mode)
Head azimuth	: ±30 deg
Drum rotation	: 1800 rpm
Tracking system	: CTL track system
Recording specification	
Main data input rate	: 28.2 Mbps (HS mode) 14.1 Mbps (STD mode) 4.7 Mbps (LS3 mode) 2.8 Mbps (LS5 mode)
Interface	: IEEE1394 compliant DTCP digital copy protection compatible

VIDEO/AUDIO (S-VHS/VHS)

Format	: S-VHS/VHS NTSC standard
Signal system	: NTSC-type color signal and EIA monochrome signal, 525 lines/ 60 fields
Recording/Playback system	: DA-4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Frequency range	
Normal audio	: 70 Hz to 10,000 Hz
Hi-Fi audio	: 20 Hz to 20,000 Hz

TIMER

Clock reference	: Quartz
Memory backup time	: Approx. 10 min.

CONNECTORS

Input/Output	: i.LINK IN/OUT (DV IN) x 2 (4-pin, S400) RCA connectors (IN x 3, OUT x 2) S-video connectors (IN x 3, OUT x 2) Component video OUT (Y, P_B/C_B, P_R/C_R) x 1 Digital OUT (optical) x 1

ACCESSORIES

Provided accessories	: Infrared remote control unit, AA battery x 2, Audio cable, S-video cable (4-pin)

Specifications shown are for SP mode unless specified otherwise.
E. & O.E. Design and specifications subject to change without notice.

EN

SR-VD400E

JVC

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